A WINDOW OPEN ON THE WORLD

UNESCO

Courier

MAY [illegible]3 (16TH YEAR) PRICE : 50 CENTS (U.S.

THE UNIVERSITY OF MICHIGAN
OCT 0 19[illegible]
PERIODI[illegible]
READING [illegible]

THE UNIVERSITY OF MICHIGAN
JUN 3 1963
DOCUMENT COLLECTION

SAFETY FIRST AT SEA

© Unesco

MOSAICS OF ANCIENT TUNISIA

The art of mosaic work which flourished at the time of the Roman Empire is a mirror of life and beliefs in the Ancient World, from hunting scenes to mythology and from religious rites to secular games. In Tunisia numerous pavement mosaics have been uncovered. A collection of some of the most striking is now offered in "Tunisia: Ancient Mosaics", the 18th volume in the Unesco World Art Series. This detail of a fishing scene (3rd cent. A.D.) is in the Susa Museum, Tunisia. Published by the New York Graphic Society by arrangement with Unesco, this album, printed in Italy, has 32 full-page colour reproductions and is priced at $18.00 or equivalent.

The UNESCO Courier
A WINDOW OPEN ON THE WORLD

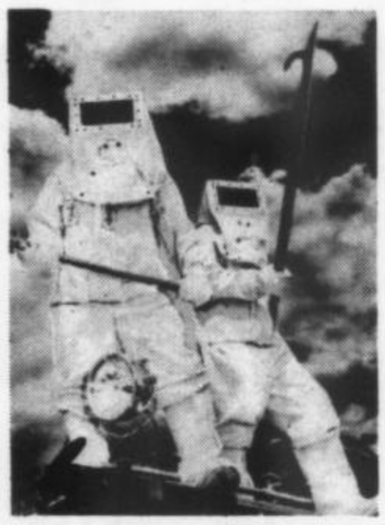
MAY 1963
16TH YEAR

Contents

No. 5

PUBLISHED IN NINE EDITIONS

English
French
Spanish
Russian
German
Arabic
U.S.A.
Japanese
Italian



COVER PHOTO

Fires aboard ship have always been one of the greatest hazards faced by the seafarer. Research into ways of improving safety equipment carried by ships has produced these awesome-looking fireproof asbestos suits for fire fighters. (Story on Safety First at Sea, page 4)

U.S. Navy

Page

4 **FOR THOSE IN PERIL ON THE SEA**
A world-wide network for maritime safety
By David Woodward

10 **A LOOK AT WORLD CO-OPERATION IN SCIENCE**
By N.M. Sissakian

17 **STAINED GLASS—400 YEARS IN ONE FAMILY**
A great artistic craft in the shadow of Reims cathedral
Photo-story by Paul Almasy

21 **THE USELESS BARRIERS**
The Hidden Face of the Cinema (5)
By Paul Léglise

25 **OPERATION 'NORDESTE'**
Brazil's bold programme in the hunger campaign
By Josué de Castro

30 **STAMPS AGAINST HUNGER**

33 **LETTERS TO THE EDITOR**

34 **FROM THE UNESCO NEWSROOM**

(M. C. 63.1., 180 A)

Published monthly by
The United Nations Educational, Scientific and Cultural Organization
Editorial Offices
Unesco, Place de Fontenoy, Paris 7e, France
Editor-in-Chief
Sandy Koffler
Assistant Editor
René Caloz
Associate Editors
English Edition : Ronald Fenton
French Edition : Jane Albert Hesse
Spanish Edition : Arturo Despouey
Russian Edition : Veniamin Matchavariani (Moscow)
German Edition : Hans Rieben (Berne)
Arabic Edition : Abdel Moneim El Sawi (Cairo)
Japanese Edition : Shin-Ichi Hasegawa (Tokyo)
Italian Edition : Maria Remiddi (Rome)
Layout & Design
Robert Jacquemin

THE UNESCO COURIER is published monthly, except in July and August when it is bi-monthly (11 issues a year), in English, French, Spanish, Russian, German, Arabic, Japanese and Italian. Sales and distribution: UNESCO Publications Center. U.S.A. 801 Third Avenue, New York 22, N.Y., Plaza 1-3860 (sole distributors of the U.S.A. edition). Second-class mail privileges authorized at New York, N.Y.

Individual articles and photographs not copyrighted may be reprinted providing the credit line reads "Reprinted from THE UNESCO COURIER", plus date of issue, and two voucher copies are sent to the editor. Signed articles reprinted must bear author's name. Unsolicited manuscripts cannot be returned unless accompanied by an international reply coupon covering postage. Signed articles express the opinions of the authors and do not necessarily represent the opinions of UNESCO or those of the editors of THE UNESCO COURIER.

The Unesco Courier is indexed monthly in The Readers' Guide to Periodical Literature.

Annual subscription (any edition) : $5.00 ; Single copies : 50 cents.

All correspondence should be addressed to the Editor-in-Chief in Paris.

FOR THOSE IN PERIL ON THE SEA

by David Woodward

DURING the years 1960 and 1961 nearly 200 ships, totalling more than three quarters of a million gross tons, were lost at sea. The exact figures were 114 ships of 418,195 tons in 1960 and 78 ships of 355,362 tons in 1961. But while details are available for ships of a certain size—only vessels over 500 tons are included in the figures given above—it is quite impossible to obtain precise figures for small craft or the loss of life by drowning.

The most nearly authoritative guesses speak of about 200,000 lives lost annually in every kind of drowning accident from a collision between passenger liners in the North Atlantic to the destruction of scores of tiny fishing vessels and their crews by a typhoon in the Far East. Accidents at sea are thus so numerous that the dead go unnumbered. The sea is still cruel and there are times when even the best-found, best-handled ship is at its mercy.

To prevent folly or greed from jeopardizing ships and the lives of seafarers, regulations have existed since Noah limited the passenger capacity of the Ark. The Greeks and Romans established regular laws. Emerging from the Middle Ages, 600 years ago, the English and the French made laws to regulate the traffic by sea; already in the Twelfth Century, the Crusaders, using mostly Italian ships, had marked on the sides of their craft a cross, the arms of which indicated the maximum depth to which the ship might be loaded. The mark of the Crusaders made its way with the flow of trade to the Baltic and within a hundred years it had been adopted by the merchants of Visby on the Swedish island of Gotland.

This use of a load line was of course on the same principle as the famous Plimsoll line adopted by British shipping in 1876 after a tremendous battle in Parliament. Plimsoll himself was by no means careful of the accuracy of the charges which he flung about the House of Commons. But fundamentally, he was right. Many men were being sent to sea in overloaded or inadequate ships for the sake of gain; such ships were too often disaster-prone in bad weather. When Britain stipulated that her ships should not be overloaded, the British Government also laid down that foreign ships using British ports should conform to the same regulations.

The problem of safety at sea had become especially grave by the nineteenth century because of the great development in world trade and because iron steamships could sustain greater hazards than wooden sailing ships. However, for centuries before the Industrial Revolution, the training of sea captains, pilots and seamen had been an object of concern to the principal maritime powers. Henry the Navigator of Portugal had, perhaps, first of all, tried to systematize these matters; the Emperor Charles V had followed his example, and Henry VIII of England founded the establishment known as the Brethren of Trinity House which, to this day, controls lights and pilotage matters in British waters. In France and the Low Countries, similar arrangements date from the sixteenth century.

This is how a German artist, Willy Stœwer, visualized the nightmare of April 15, 1912, as panic-stricken survivors struggled to get away from the rapidly-sinking "Titanic" after it crashed head-on into an iceberg. Only 711 people were saved. The death toll was 1,517. This tragedy eventually brought about measures to promote safety at sea, including the setting up of iceberg patrols and stringent regulations about the proper number and proper equipment of lifeboats to be carried by all vessels.

© UPI

Nevertheless, much more than that was needed for the training of seafarers in the first half of the nineteenth century. The Foreign Office in London, through its consuls abroad, began a long agitation to raise the standards of conduct and technical proficiency in the British merchant service—not only for humanitarian reasons but for economic ones as well. The consul at Riga reported in 1843:

"Foreign shipmasters are generally a more respectable and sober class of men than the British. I have always been convinced... that British shipowners... are great

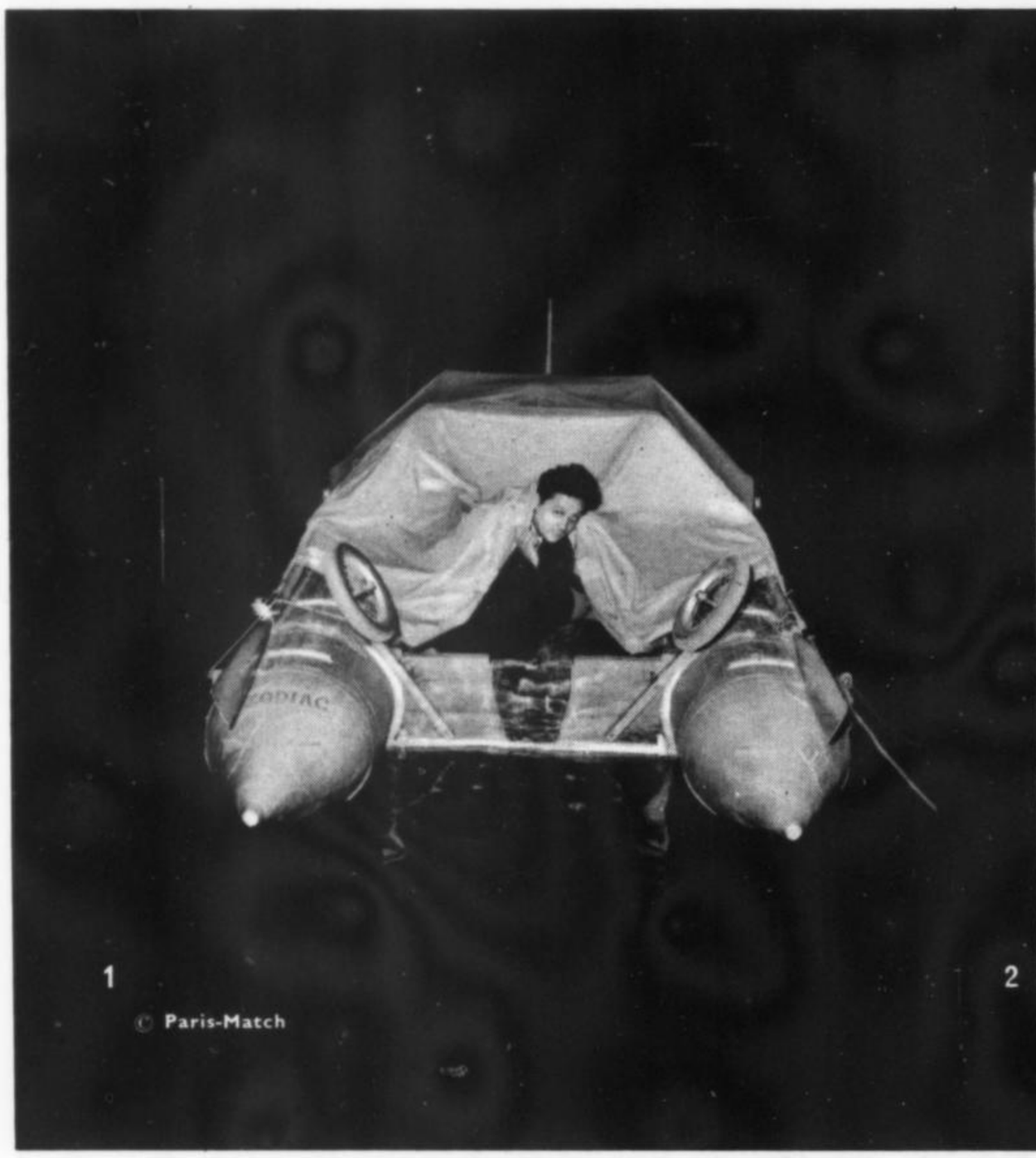
losers from the serious delays occasioned while on the voyage and discharging and taking in cargoes, growing out of the incapacity of their shipmasters and their intemperate habits. I have had occasion to remark... that American vessels, in particular, will make three voyages to two of a British vessel, in this way having an immense advantage over their competitor" (1).

Developments in the field of trade and in naval construction had brought increased problems to the seafarer, but at the end of the nineteenth century developments in telecommunications more than redressed the balance. Nevertheless, when radio telegraphy was first introduced, it began in a state of confusion. Ships and shore stations were often fitted with different types of equipment operated by different companies. Competition became so keen that the employees of one radio company would not handle the traffic of another; sometimes they would even jam rival signals or broadcast abuse of each other. It took two big international conferences held at Berlin in 1903 and 1906 to bring some order to the situation and to secure an acceptable agreement between the various countries.

A little later, in 1909, came the first use of wireless telegraphy to summon aid to a vessel in distress, when the White Star liner *Republic* was sunk in collision off Nantucket. A young man who was the ship's radio operator made history and a name for himself by sticking to his post and summoning aid which was brought by ships of five different nationalities. These immediate replies to the *Republic's* distress signals were an extension of the unwritten law of the sea whereby a response must be given to appeals for help. There is also a material side, since the first ship to answer effectively an appeal for help may be able to earn her owners and crew very considerable sums for salvage.

(1) *Seafarers and Their Ships, London, H.M.S.O.*, 1955, *p.* 22.

CONT'D ON NEXT PAGE



1

© Paris-Match

2

© Nordisk Pressefoto, Copenhagen

Lessons of the 'Titanic'

The original radio distress call had been the letters CQD—Come Quick Danger—but by 1912, this had been changed by international agreement to SOS—not because those letters stand for anything, but because the combination of three dots, three dashes, three dots in Morse code was judged to be especially ear-catching. The signal is sent "SOSOSOS..." while a lesser degree of emergency is signified by the letters "TTT." Much later, with the over advent of radio telephony, the phrase "May Day" (from the French *m'aidez*) was used for a spoken, as opposed to a Morse appeal for help.

Three years after the loss of the *Republic* came the sinking of the *Titanic*, perhaps the greatest peacetime sea disaster in history.

Even after fifty years crowded with terrible events, the story of this disaster still has power to horrify. In 1912, when the nations had experienced no world war for almost a hundred years, it came as a blow so shocking that it made men doubt the whole order in which they lived.

Briefly, four vital factors had caused the disaster and the enormous loss of life which accompanied it. They were:

- The failure of the iceberg warning measures.
- Insufficient life boats to hold all the passengers and crew.
- Poor water-tight compartmentation, so that the ship flooded easily, and
- Confusion over radio traffic, which hampered reception of the *Titanic's* SOS.

A conference of the principal sea-faring powers was convened in London during the winter of 1913-14 to deal with these points on an international basis. Although the agreements were never officially ratified, because of the outbreak of World War I, they did bit by bit come off the conference table and begin to shape the lives of those who worked or travelled by sea.

First and foremost of these agreements was the formation of the North Atlantic Ice Patrol. This was set up by the United States Coast Guard with international financial support and functions to this day, using ships and aircraft to spot dangerous icebergs.

The *Titanic*'s boats held only 1,178 people, and the ship had on board at the time over 2,200 people. In fact owing to the difficulty of loading and handling the boats, not more than 700 actually found places in the boats, and 1,517 people lost their lives, hundreds of them not drowned, but found next morning floating in their life jackets, frozen to death in the icy waters.

Accordingly, "boats for all" became a popular slogan, and the 1913-14 conference laid great stress on these being provided in the future—perhaps too much stress, because there are many occasions upon which a ship sinks so fast that there is no time to complete the launching of boats, and extra life rafts would be more valuable than boats.

Regulations were also proposed by the Conference to

FOR THE SAFETY OF SEAFARERS

Vigilance and courage supported by regulations and technological progress—these are man's weapons in his never-ending struggle to save lives at sea. (1) French explorer Dr. Alain Bombard, who spent months alone on a tiny "raft" in the North Atlantic carrying out a courageous feat of survival research. He was able to obtain water by catching fish and squeezing them in a small press. (2) The latest in lifeboats, devised and built in Denmark. With its hatch closed down it is virtually unsinkable and can ride out the roughest seas. (3) An R.A.F. helicopter plucks two French sailors from the wreck of their trawler, on the jagged rocks at Land's End, in Cornwall, England.

© UPI

improve the standard of water-tight compartmentation, and also to diminish confusion over radio messages warnings of icebergs had failed to reach the *Titanic*'s captain, and his SOS went unheeded by a ship within sight of the lights of the stricken liner, because her radio operator had gone to bed.

At the conclusion of World War I and with the creation of the International Labour Organisation (ILO) in Geneva, another approach was made to the question of safety of life at sea. The ILO's principal preoccupation was with working conditions and hours, but their immediate relevance to safety may be seen when efficiency is considered in terms of a well-fed, well-rested and healthy crew compared with one which is not.

Crowded forecastles, where men sleep in damp straw, eat badly-cooked mixtures of food from a single dish, after it has been carried from the galley across an open half-deck, where there is a struggle to dry soaked clothing and as hard a struggle to get sufficient fresh water, are not quite a thing of the past. But the picture is certainly brighter than it was thirty years ago and international action can take much credit for the improvements that have been made.

While the conference room has thus been productive of reform at its own tempo over the past four decades, the laboratory and the electrical workshop have within the past 15 years or so provided a series of revolutions of their own in the field of maritime safety. At the end of both world wars, international co-operation at sea on a large scale was necessary to sweep the hundreds of thousands of mines laid by both sides.

In between 1914 and 1918 some 240,000 mines were laid, while that figure was nearly doubled in the Second World War. The mines were most thickly strewn in European waters and in the three years after V-E-day, 1,900 minesweepers took three years to sweep safe channels of some 125,000 miles. In theory, these mines become useless after a period of years, but no chances can be taken. After all, live mines from the Russo-Japanese war of 1904-5 were still being reported in the 1930's.

Some wartime developments for detecting ships and aircraft have resulted in entirely new devices which have revolutionized navigation, especially in dangerous waters. Nor is there any sign of this process of change being complete—future developments, it would seem, will be just as far-reaching as those which have occurred since 1945. Radar and its refinements have combined to offer solutions to a great many of the mariner's safety problems, although they have in turn set problems of their own.

Briefly, radar's supersonic electrical impulses, reflected off objects which they strike above the surface of the sea, reveal the presence in fog or darkness of rocks, other ships or other obstacles. At the same time, the electric impulses of asdic or sonar can reveal the depth of the sea and the presence of submerged obstacles.

These new sciences are still in their infancy. Refinements of radar are now being developed whereby stations

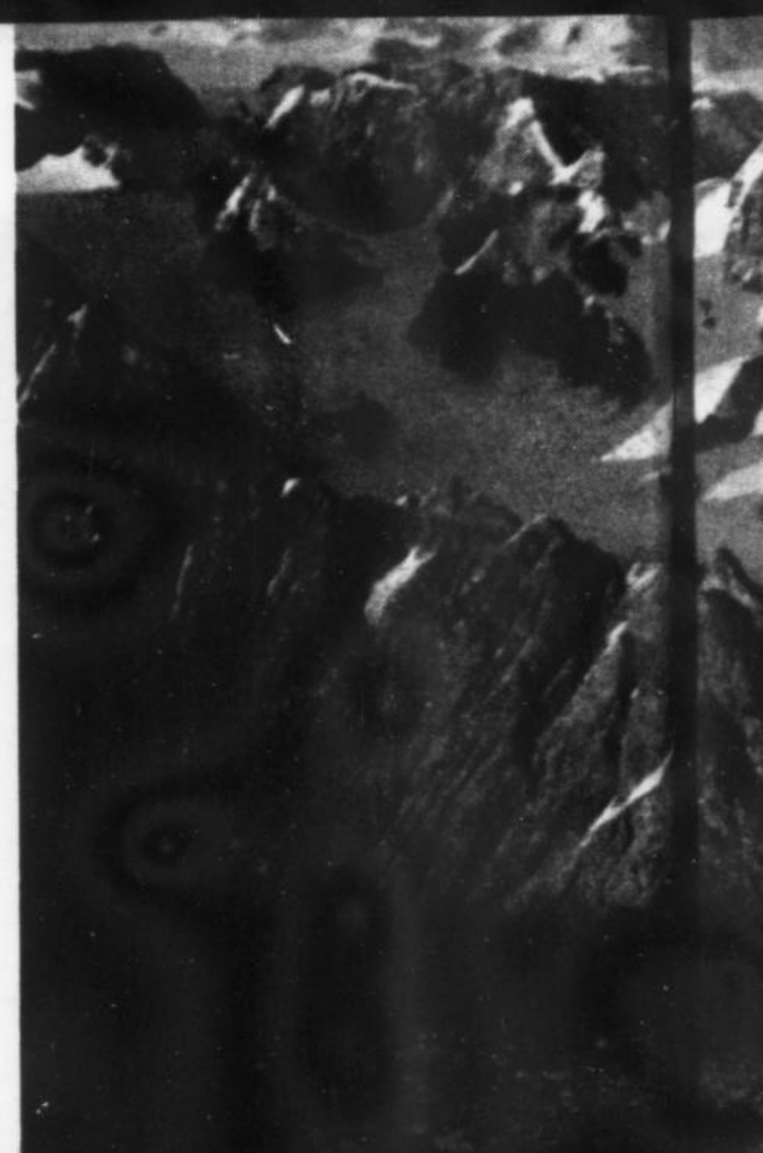
CONT'D ON NEXT PAGE

World network for safety at sea

ashore and on board a ship, working together in coastal waters, can indicate a ship's position as a tiny disc of light on her own chart. Experts point out, however, that these and other devices are only aids to navigation, and that the first line of defence against disaster is the mariner himself, his eyes and his brain.

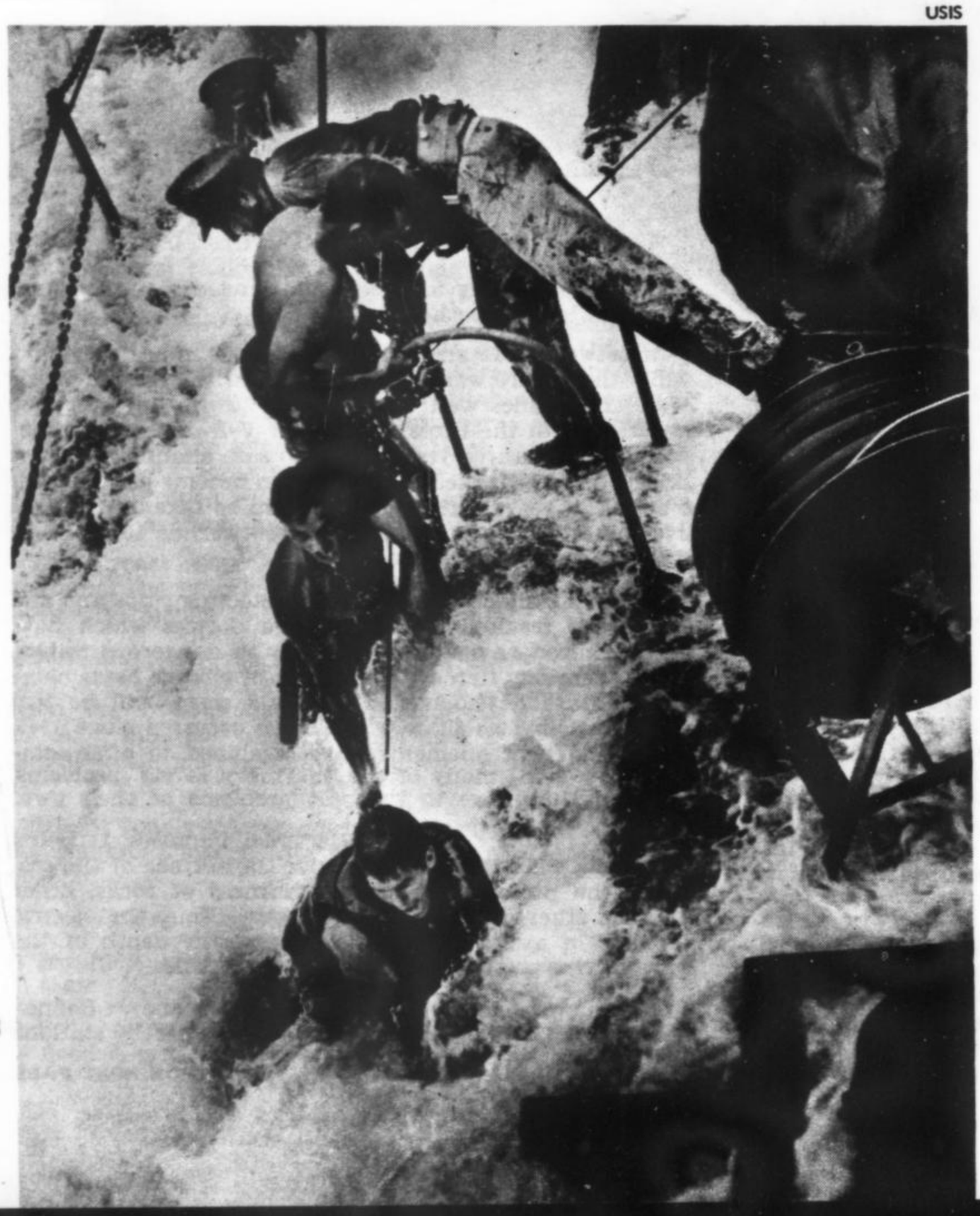
The precision of such developments is such that the suggestion has now been put forward that in crowded waters and fog—the seaman's worst enemy—the movements of ships should be controlled from the shore in the same manner that the landings and take-offs of aircraft are controlled from the ground. The traditional independence of ship-masters is likely to give this proposal a discouraging reception but as traffic grows, it may be necessary to impose it, nevertheless. It is at any rate a far cry from the fog-horn hitherto the only aid to safety and navigation in thick weather.

A similar measure of control which has been proposed is the introduction of a kind of one-way traffic system in the Straits of Dover, whereby west-bound ships use one channel and east-bound ships another. The Straits are still the busiest sea lane in the world, with 750 ships passing every day.



Tiny white specks in the sea are actually massive icebergs —those in the centre are exceptionally large ones—that have "calved" from the glacier seen in this aerial photograph taken off the east coast of Greenland. These ice-islands become deadly serious maritime hazards when they drift southwards into the Atlantic shipping lanes. But ships and aircraft of the North Atlantic Ice Patrol are on the watch and warn shipping of the presence of the icebergs.

USIS



Somewhere at sea a ship is in distress. Out goes an SOS and other ships change course to bring help. Here a U.S. Coastguard patrol boat picks up survivors of a vessel lost in a hurricane. To reach the shipwreck it braved waves 60 feet high and winds of 90 m.p.h.

© French Polar Expeditions Paul-Emile Victor

IMCO, to which this proposal has been referred, is the Inter-Governmental Maritime Consultative Organization which was set up in London in 1959 as the maritime agency of the United Nations. In its first four years of existence, more than 50 nations with most of the world's shipping, have become members. One of its main tasks is to place the international work on safety of life at sea on a permanent basis, which was hitherto the task of international conferences summoned from time to time at sporadic intervals. The first such conference was that already mentioned after the *Titanic* disaster in 1914-15; two more followed in 1929 and 1948.

However, IMCO's concern is not only with the safety of life at sea; the agency also deals with discriminatory actions and restrictive practices in the field of shipping, organizes the exchange of information between governments and considers any maritime question that may be referred to it by the United Nations or by any of the other specialized agencies.

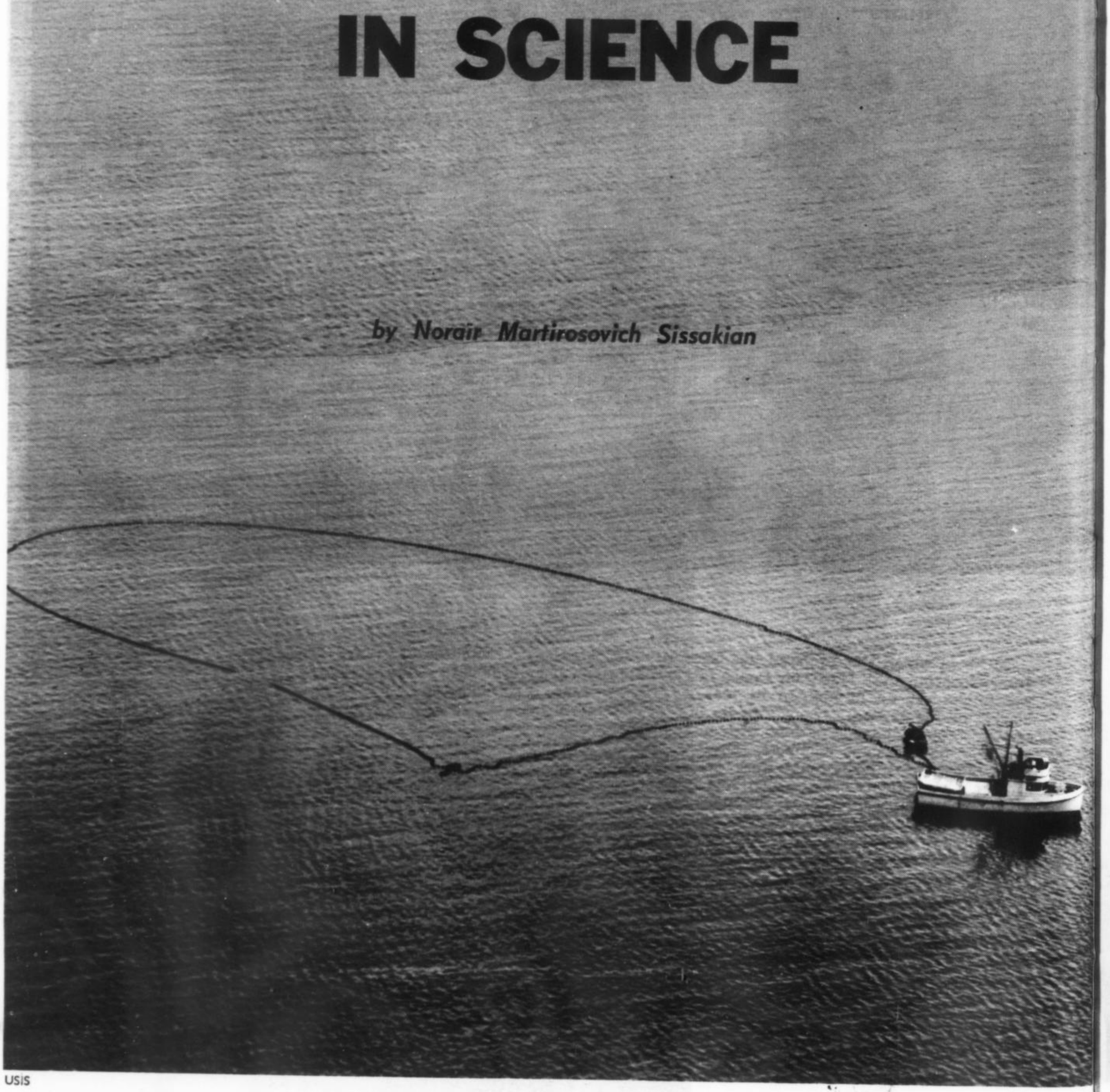
In May and June 1960, IMCO held a conference in London on the safety of life at sea, at which fifty-four nations were represented. This meeting thrashed out the technical aspects and drew up a new Convention which included up-to-date provisions on the use of radar and modern types of life-saving equipment. The safety of nuclear-powered ships, signalling, fire-fighting, electrical equipment and collision regulations were all included in the final Convention. The measures adopted represented another step forward to reduce the risks run by seafarers.

But in the struggle with the sea there can be no final victory. Vigilance, courage and ingenuity are always required. International regulation and electronic invention can strengthen these qualities, but are no substitutes for them. A note of the grim reality which lies behind IMCO's work was provided recently by that organization's request to the World Health Organization to set up an expert committee to investigate the controversial problem of whether shipwrecked mariners should, in an emergency, drink sea water. The experts unanimously decided against such a remedy, despite recent claims that this is one way in which the castaway can prolong his life.

DAVID WOODWARD *is a documentary writer-producer for the British Broadcasting Corporation, London.*

A BIOLOGIST LOOKS AT WORLD CO-OPERATION IN SCIENCE

by Norair Martirosovich Sissakian



USIS

THE FISHERMAN'S FRIEND: The chemist, the biologist, the geologist and the physicist are all keenly interested in the sea today and international co-operative research in these fields is growing. Efforts to increase our food supply from the oceans depend not only on the fisherman but the marine biologist. Here scientists on the deck of an oceanographic research vessel are seen gathering microscopic specimens from the sea in the course of a research cruise.

National Institute of Oceanography, Great Britain

Just as life itself depends on biological exchange for its normal development, so science needs the exchange of ideas, methods and principles for its own enrichment and to strengthen the control of man over nature. Perhaps nowhere does the need for scientific co-operation on an international basis emerge with such clarity as in the field of biology, or, putting it more broadly, in the field of life sciences.

This co-operation is all the more indispensable as, within present-day natural sciences, the biological sciences are progressively assuming an ever-larger place ; the part they play in the promotion of welfare for all mankind is becoming more and more influential. If we consider the matter in its broadest perspective, mankind is faced with a number of vitally important problems, which we cannot afford to ignore.

With steadily widening economic, scientific and cultural contacts between peoples, I believe the foremost obligation of scientists is the unification of creative efforts for the successful elaboration of the following scientific problems:

- Assurance of unlimited resources of energy for the use of mankind;
- Enlargement of food resources to meet the needs of all peoples of the globe in foods of full nutritive value;
- Elimination of all infectious diseases and the creation of material and hygienic conditions for longevity, along with conservation of vigour, capacity for work, and physiological activity at a sufficiently high level;
- Exploration of other worlds of the universe, the understanding of their laws and the utilization of these for the welfare of all mankind.

These problems of science, which concern all humanity, inspire the scientists of the whole world—those true scientists for whom the great power of science must serve exclusively the interests of peace, friendship and happiness of all people. These ideas and problems must and should, I believe, serve as a basis for the organization of international scientific co-operation.

In this respect, we have positive experience to work on. The co-operation of scientists in the programme of the International Geophysical Year, the creative work of scientists from several countries in the Antarctic, the beginning of large-scale research on marine life within the framework of Unesco, the experience gained as a result of mutual agreements on scientific co-operation among many countries of the world—all this represents an important contribution to mutual understanding and co-operation between peoples.

International scientific co-operation may be realized in various ways and at various levels. In particular, the organization of international symposiums and widely representative scientific meetings can do much in this respect. For example, the International Biochemical Congress held in Moscow in August 1961 proved to be a magnificent forum for the biochemists of the world.

If the problems of securing permanently available energy resources for all of mankind must be solved by the efforts of physicists and power specialists, the other problems which I have listed will have to be dealt with by representatives of an intricate complex of biological sciences.

A number of important problems may be cited which, in

CONT'D ON NEXT PAGE

my view, may serve as a basis for international co-operation:

- The study of forms of life, of laws of reproduction and the increase in biological productivity of the world's oceans;
- Elucidation of the nature of photosynthesis so as to be able to reproduce this truly cosmic process otherwise than in chlorophyllous plant life;
- The multi-disciplinary study of the brain.

The study and the utilization of the world's oceans, like meteorological and geophysical research, is the most appropriate and the most necessary form of international scientific co-operation.

The ocean is the largest integral natural object on our planet, in which all processes and phenomena are interdependent and interdetermined. The study of the ocean calls for co-ordinated research in several disciplines such as physics, chemistry, biology and geology.

THE scientific study of the ocean and of the problems of its practical utilization must be treated as a single coherent entity. There must be no schism whatsoever between theoretical investigation and practical problems.

Studies of the physical processes in the watery mass of the ocean and the interaction between it and the atmosphere will bring solutions to many problems concerning navigation, climatic forecasting and the utilization of the power resources of ocean waters. Chemical and geological studies of the ocean will lead to the utilization of its mineral resources; the geological findings will also result in important progress in navigation and port-building. Bio-oceanological research is necessary for the full and rational utilization of the vital resources of oceans and for the solution of navigation problems. A fuller knowledge of the ocean will help us to develop rational means of protecting the ocean from pollution, from the deterioration of its biological resources, and from dangers to the health of mankind.

The present rapid development of such studies is explained by the fact that this branch of science and its practical aspects lagged behind others in the past, as well as by the application of many new methods of research and the realization of the tremendous scope and significance, from both theoretical and practical viewpoints, of the perspectives of scientific and economic mastery of the global ocean.

In working out an international programme for biological investigation of the ocean, the international study of the Indian Ocean which was started in 1959 and which should continue for the next 3 to 5 years under the joint supervision of SCOR (Scientific Committee for Oceanic Research) and UNESCO must be taken into account because of its great importance. Yet these investigations should in no way impede the development of general international research in oceanography within the programme of the Intergovernmental Oceanographic Commission, one of whose tasks is to determine the character and intensity of biological processes which take place in various parts of the global ocean—in other words, to elucidate all aspects of the biological structure of the ocean.

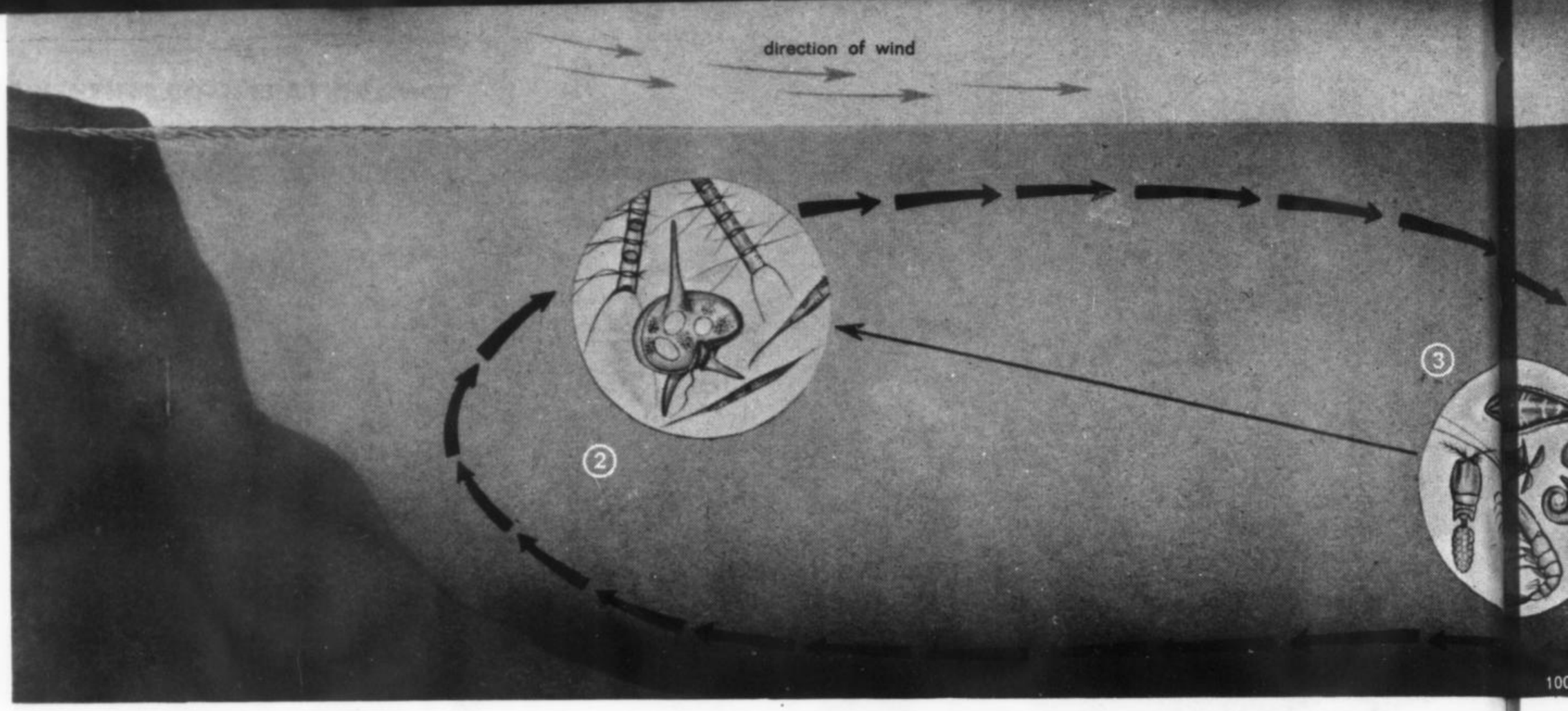
CONT'D ON PAGE 14

© E. Aubert de la Rue

GIANT MARINE PLANTS & PYGMY

The tiniest of seaplants are mostly invisible to the naked eye. Their hidden beauty, however, is revealed by microphotography, through whose penetrating eye the cluster of common algae (right) is seen to resemble a delicate fan richly studded with gems. Fronds of giant seaweed (left) line the banks of a fjord on the Kerguelen Islands in the Antarctic. Seaweeds have long been used as a source of iodine and vegetable gelatin and many kinds are eaten directly because they are a rich source of vitamins and minerals.

USIS



SCIENTIFIC CO-OPERATION *(Cont'd)*

Mysteries of photosynthesis

The basic task of marine research must be the study of the character and tempo of biological productivity at various latitudes and in various parts of the global ocean, the qualitative and quantitative structure of its plant and animal life and their biological peculiarities. The process of production undergoes regular changes according to the physical and chemical conditions experienced in the various geographical zones; from pole to pole, from the shores to the central parts of the ocean, and from its surface to its depths, the quantitative changes may vary a hundred-, a thousand-, and a hundred-thousand-fold.

The international programme of biological reseach must include the study of plant and animal organisms as possible carriers and concentrators of radioactive waste matter, and the phenomena of biocirculation as one way by which such matter may be dispersed in the ocean.

The biological data thus obtained must form the oceanological basis for the recognition and evaluation of fish and other kinds of resources in regions whose resources have so far been barely used or left completely untouched. Nevertheless, the tremendous amount of information collected by international oceanographic programmes should not be kept separate from practical considerations, such as those which affect the fishing industry. In no case should incomplete utilization be permitted of the data obtained in the investigation of the ocean, for such data can be of use to various branches of economy, including the fishing industry.

Today the photosynthesis of plants (in which the plants perform the primary synthesis of organic substances and store the energy from solar radiation) is practically the only primary source of food for all living organisms on earth, including man.

There is no doubt that in the future, too, the decisive role in this area will be played by the natural photosynthesis of plants, for only the cultivation of highly productive plants over tremendous territories can guarantee the abundance of food needed for the world's population no matter what its size, and can satisfy the needs and tastes of man in respect of the composition and variety of such food supplies.

At present, the green plants of the globe create through photosynthesis hundreds of times more organic substances than are needed as food by the population of the Earth. Even so, the problem of food resources is one of the most acute problems of contemporary mankind. This problem has social and biological-technical aspects.

For example more than 90 per cent of photosynthetic production occurs in the plants of seas and oceans and of forests and prairies, yet the percentage of this production used for food is extremely low (about 0.02). Cultivated plants produce only 10 per cent of the total photosynthetic production, but the proportion of utilization of this production for food is high: the cultivated food and fodder plants yield not less than 80 percent of the food used by human beings.

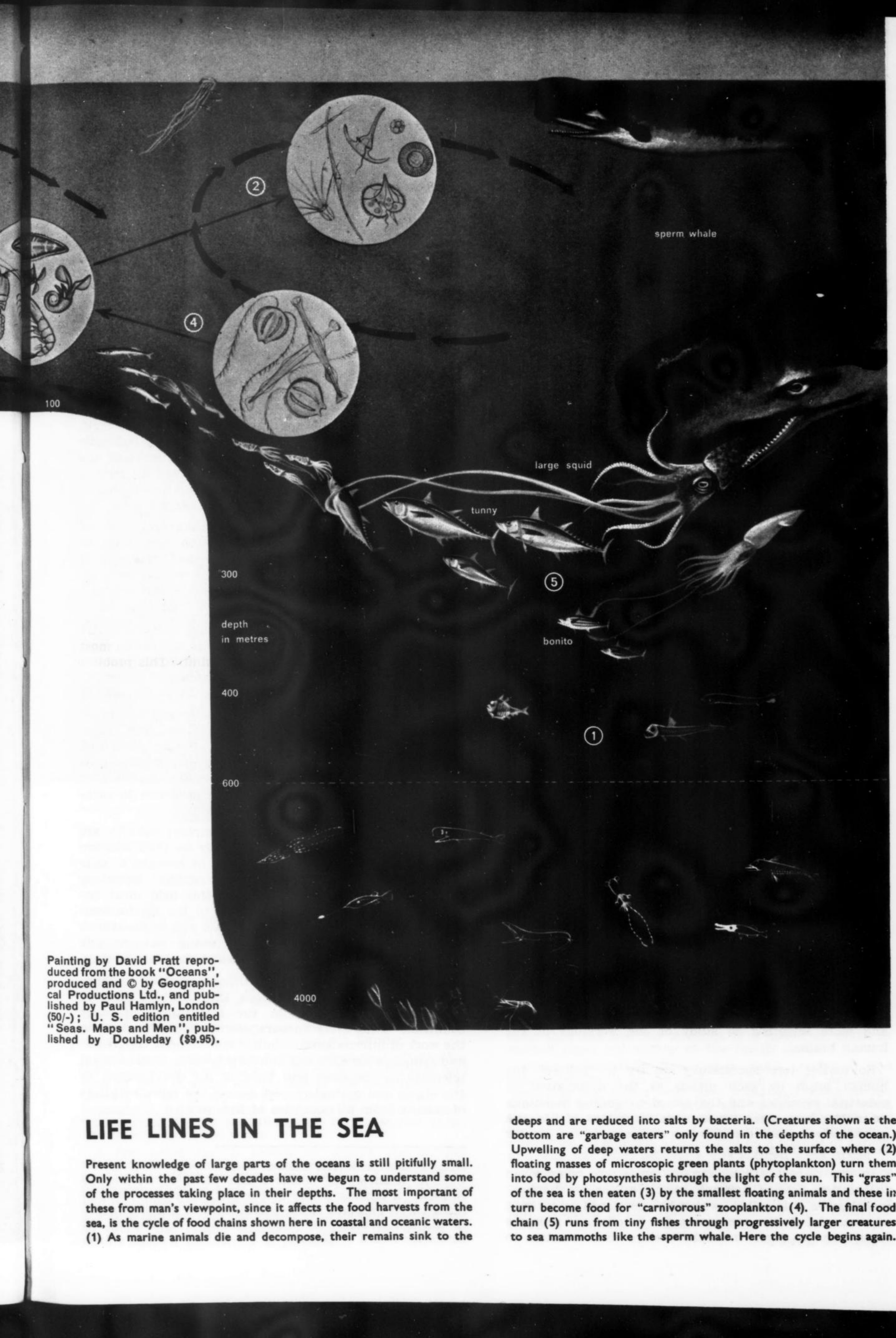
Nevertheless, this production does not fully satisfy the food requirements of mankind. Furthermore, to the problem of assuring food supplies of the requisite nutritive value for present generations must be added that of providing for the constant growth of the population. For, after all, it is the potential products of photosynthesis and the extent to which mankind can utilize these products for food that will determine the population potential of the globe and its standard of living.

For this reason, the photosynthesis of plants, the increase of photosynthetic production and the control of plant photosynthesis as a source of food are among the most important problems of mankind.

The adequate, rapid and most advantageous solution of the problem of photosynthesis in the above context depends to a large degree on the co-ordination of research on an international scale. Let us consider the following examples:

● According to contemporary calculations—which, however, are neither precise nor final—about 80 per cent of the total photosynthetic production of plants of the globe is carried out by the photosynthesizing organisms of seas and oceans (mainly unicellular seaweeds).

CONT'D ON PAGE 16



Painting by David Pratt reproduced from the book "Oceans", produced and © by Geographical Productions Ltd., and published by Paul Hamlyn, London (50/-); U. S. edition entitled "Seas. Maps and Men", published by Doubleday ($9.95).

LIFE LINES IN THE SEA

Present knowledge of large parts of the oceans is still pitifully small. Only within the past few decades have we begun to understand some of the processes taking place in their depths. The most important of these from man's viewpoint, since it affects the food harvests from the sea, is the cycle of food chains shown here in coastal and oceanic waters. (1) As marine animals die and decompose, their remains sink to the deeps and are reduced into salts by bacteria. (Creatures shown at the bottom are "garbage eaters" only found in the depths of the ocean.) Upwelling of deep waters returns the salts to the surface where (2) floating masses of microscopic green plants (phytoplankton) turn them into food by photosynthesis through the light of the sun. This "grass" of the sea is then eaten (3) by the smallest floating animals and these in turn become food for "carnivorous" zooplankton (4). The final food chain (5) runs from tiny fishes through progressively larger creatures to sea mammoths like the sperm whale. Here the cycle begins again.

Exploring the workings of the brain

But this production is used by man as food almost exclusively through industrial fish and other animals, by way of complicated and often circuitous food chains.

As a result the coefficient of utilization of the photosynthetic production of seas and oceans for food for man is so small as to be almost negligible. This situation is made worse by the total absence of attempts to regulate the photosynthetic activity of phytoplankton of seas and oceans, the lack of serious attempts to reconstruct and improve the food chains, and also above all by the primitive methods used to bring in the harvest of fish and animals, which are both insufficient and often predatory in character.

Finally, it is important to determine the extent and possibilities of regulating and utilizing the photosynthetic production of oceanic vegetation. This potentially tremendous source of food and of other valuable material for man must no longer remain neglected as it has done in the past.

● As to plants on the earth's surface, especially cultivated food and fodder plants which in the future, too, will constitute the main supplies of food for men, the basic factor determining their possible and final production is solar radiation energy, the principal force of the process of photosynthesis. In fact, all agriculture constitutes a system of processes the object of which is the utilization of solar radiation energy to form organic substances with the help of photosynthesis.

Our knowledge concerning the solar radiation energy which can be used for photosynthesis in various zones of the globe and on the globe as a whole is far from complete and certainly insufficient.

To change this present unsatisfactory situation calls for broad unified efforts in bio-actinometrics over as large areas of the globe as possible.

In the final analysis wide-ranging and well co-ordinated studies in photosynthesis and in the optimum use of solar radiation energy for this purpose, will open up for mankind unlimited possibilities for the solution, on any scale desired, of the most important biological and technical problems. Complete, rapid and radical solutions to these problems will only come through unified efforts of scientists within a broad framework of international co-operation.

The exceptional significance of cerebral activity in the history of man, in his productive efforts, his cultural life, his education and in so many other fields, is drawing more and more scientists to study of the workings of the human brain.

No matter how successfully we try to "relieve" the human brain by such means as the automation of industrial processes and the use of computing machines, no matter how much we improve conditions of life, the growth of science and technology makes more and greater demands on the activity of the human brain.

In this respect, special recognition is now being given to the new field of neuropharmacology—or psychopharmacology as it is called—which has developed as a result of successful studies concerning the functions of separate brain centres, their interrelationship, their reaction to drugs, as well as of specific metabolic processes in various parts of the brain.

Drugs have been discovered which, by changing the metabolism of specific regions of the brain, raise or lower the tonus of the cortex, bring about changes in behaviour and affect the activity of internal organs. Medicine has acquired potent means for the treatment of a number of psychic diseases and epilepsy. And there is no doubt that if they continue on this path scientists in the near future will acquire even more effective means and methods for the directional regulation of brain activity.

Here we refer not only to the treatment of brain diseases and their prevention in hereditarily tainted persons, but also to the re-establishment of the complete and efficient working of the brain in persons with neurotic tendencies and insomnia and the treatment of narcomanias (alcoholism, caffeinism, etc.).

Furthermore the development of contemporary science and technology stimulates the need to find ways of increasing the working efficiency of the brain and of boosting intellectual activity. In other words, we must find ways of raising the speed of memorizing and the extent of memory, of fighting against premature brain fatigue and of maintaining a normal tonus of nervous activity.

It is obvious that apart from other general measures this will be achieved through action on the metabolism in the central nervous system and the ability to regulate it.

Particularly difficult conditions, usually referred to as extreme conditions, are occurring more and more frequently during the working activity of man. Here, too, methods affecting the nervous system, based on neurophysiological and neurobiochemical studies, should play an important role along with general measures to safeguard the normal activity of the brain.

All these problems are extremely complex; not only are those sciences which must work directly for their solution challenged but other forces must also be brought to bear if we are to reach successful solutions rapidly. Scientists of different countries who work in this field must co-ordinate efforts in the further study of the mechanisms which regulate the activity of the brain and in the search for new directional means which would have no side effects on the basic nervous processes in the brain of man.

While scientists of the Soviet Union are ready to share the results of their investigations, they are also eager to learn what is happening in the institutions of other countries. Thus every encouragement should be given to the work of international scientific conferences, congresses and symposia for each one is a step towards international scientific co-operation and towards the development of friendship and mutual respect among the representatives of science from all countries of the world.

NORAIR MARTIROSOVICH SISSAKIAN *is Vice-President of the U.S.S.R. Academy of Sciences and Chief of its Biology Branch. A leading Soviet biochemist, he has carried out research on enzymes in the metabolism of organisms and in the cell structure of plants. He is a member of the Executive Board of* UNESCO.

© Paul Almasy, Paris

STAINED GLASS

400 YEARS IN ONE FAMILY

by Paul Almasy

For the past four centuries the oldest-established firm of stained glass makers in France belonging to the Simon family of Reims has been handed down uninterruptedly from father to son. Here, Jacques-Paul Simon, who restored the shattered windows of Reims Cathedral after the First World War works with his daughter and son-in-law on a modern-style stained glass window.

In the ancient French cathedral city of Reims lives a family which can look back over four centuries of unbroken dedication to a great artistic craft—the design and execution of stained glass windows.

The history of the Simon family as makers of stained glass began in the 16th century when Paul Simon settled in Reims and opened a workshop in the shadow of the soaring Gothic cathedral. Here he began to work in stained glass—an artistic craft that originated in antiquity and gradually spread throughout Europe.

Paul Simon could hardly have foreseen that his humble little workshop would survive him by many centuries and that in time it would become one of the most highly esteemed of all places where stained glass is made. In founding it, he also created a dynasty of artist craftsmen who handed on the tradition from father to son uninterruptedly down the years.

A few years ago it looked as though the famous workshop in Reims would pass into other hands. The head of this oldest established firm of stained glass makers in France, Jacques-Paul Simon, was thinking of retiring and he hoped his son would succeed him. But Luc Simon, a young painter, told his father that he had decided not to follow the family tradition. Instead he wished to devote himself exclusively to painting.

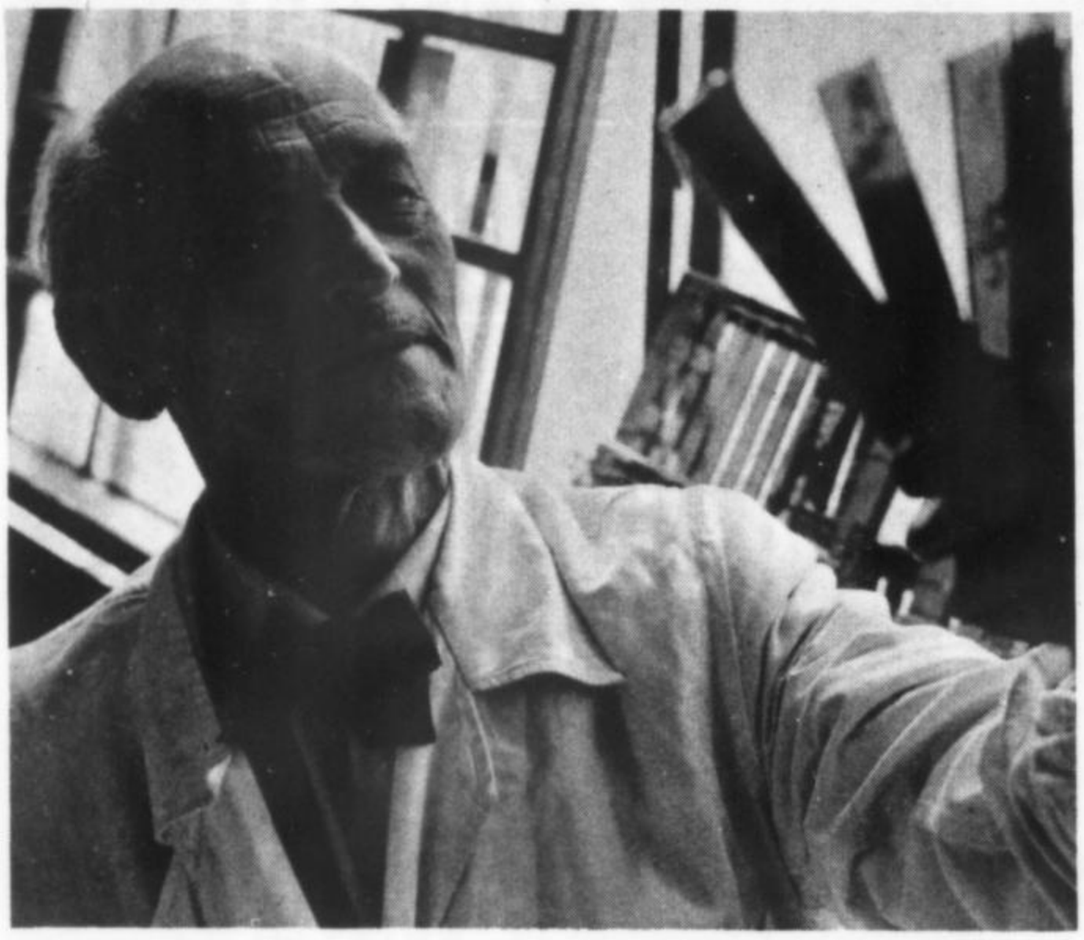
This was a hard blow for his father. It now seemed almost certain that the dynasty would come to an end. Then Jacques Paul's daughter, Brigitte, an art student in Paris, stepped forward. "I'll try to carry on the work," she told her father.

Jacques-Paul Simon accepted immediately, and Brigitte left the art school in Paris and came to the workshop in Reims. She began her apprenticeship with enthusiasm and from the energy and talent she displayed, it was soon clear that she had the makings of a first-class artist in stained glass, one worthy of the family name.

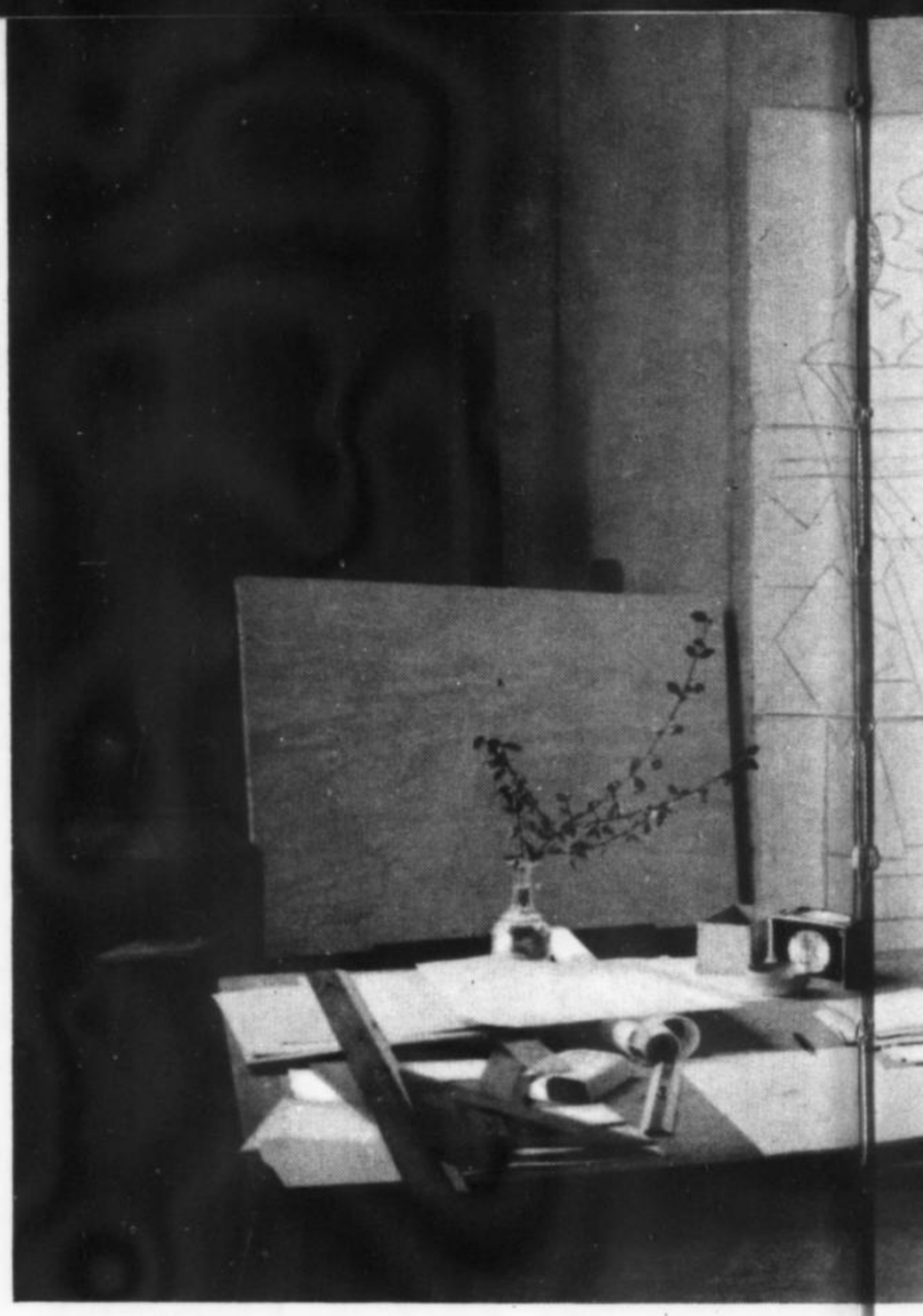
These expectations have since been confirmed and today Brigitte is in complete charge of the workshop. Nowadays her father only pays occasional visits to the workshop to inspect with pride and satisfaction the work Brigitte is doing. Brigitte shares this work with her husband, Charles Marq, a former student of philosophy who, when he married, also decided on a change of career, and who has since become a fine stained glass artist.

Examples of the skill and artistic talent of the members of the Simon family who ran the workshop in the 16th, 17th and 18th centuries are recorded in the family archives and preserved in the windows of many French churches. However, perhaps the most striking achievements were

CONT'D ON PAGE 20

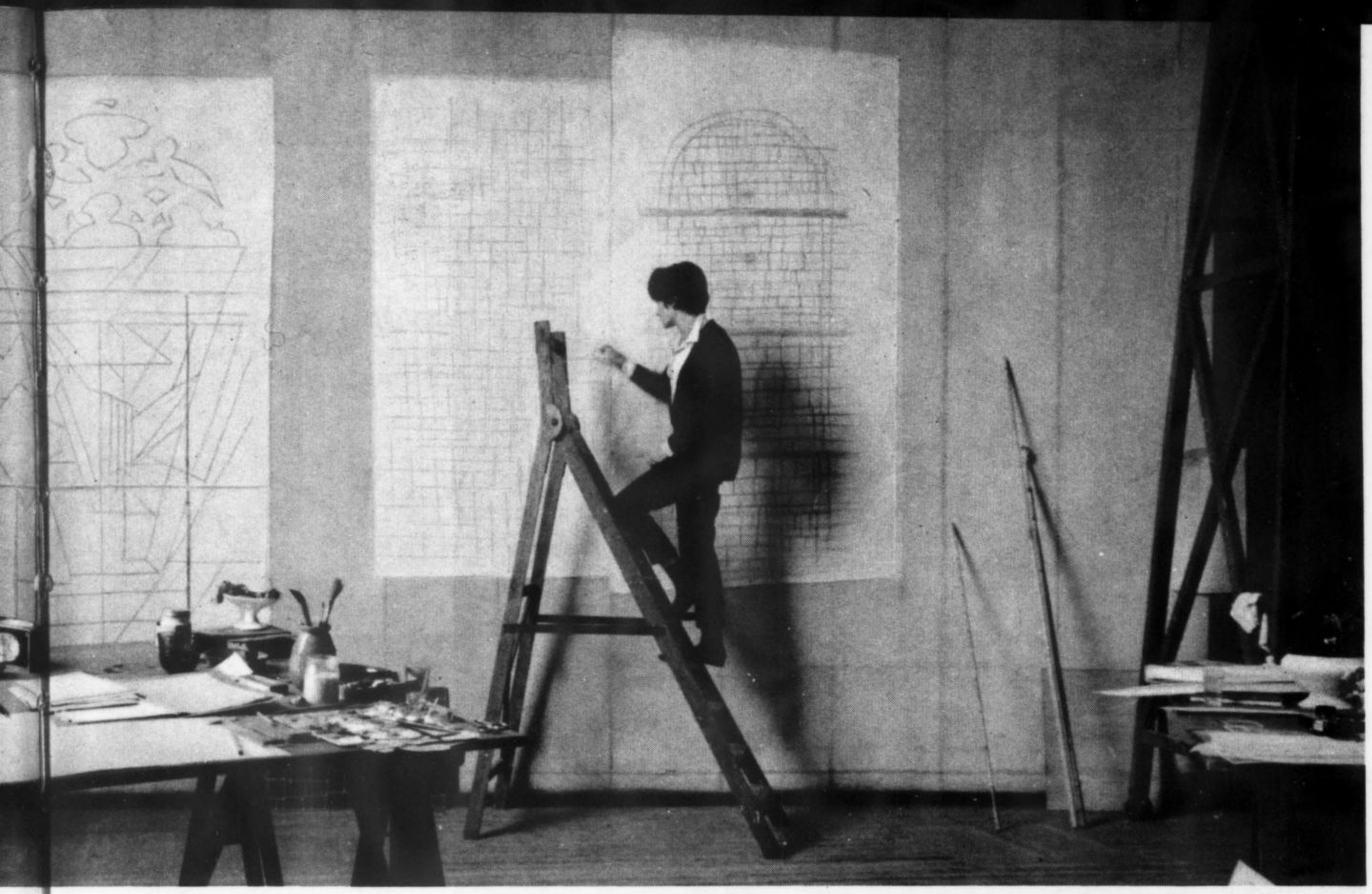


CARRYING ON THE FAMILY TRADITION

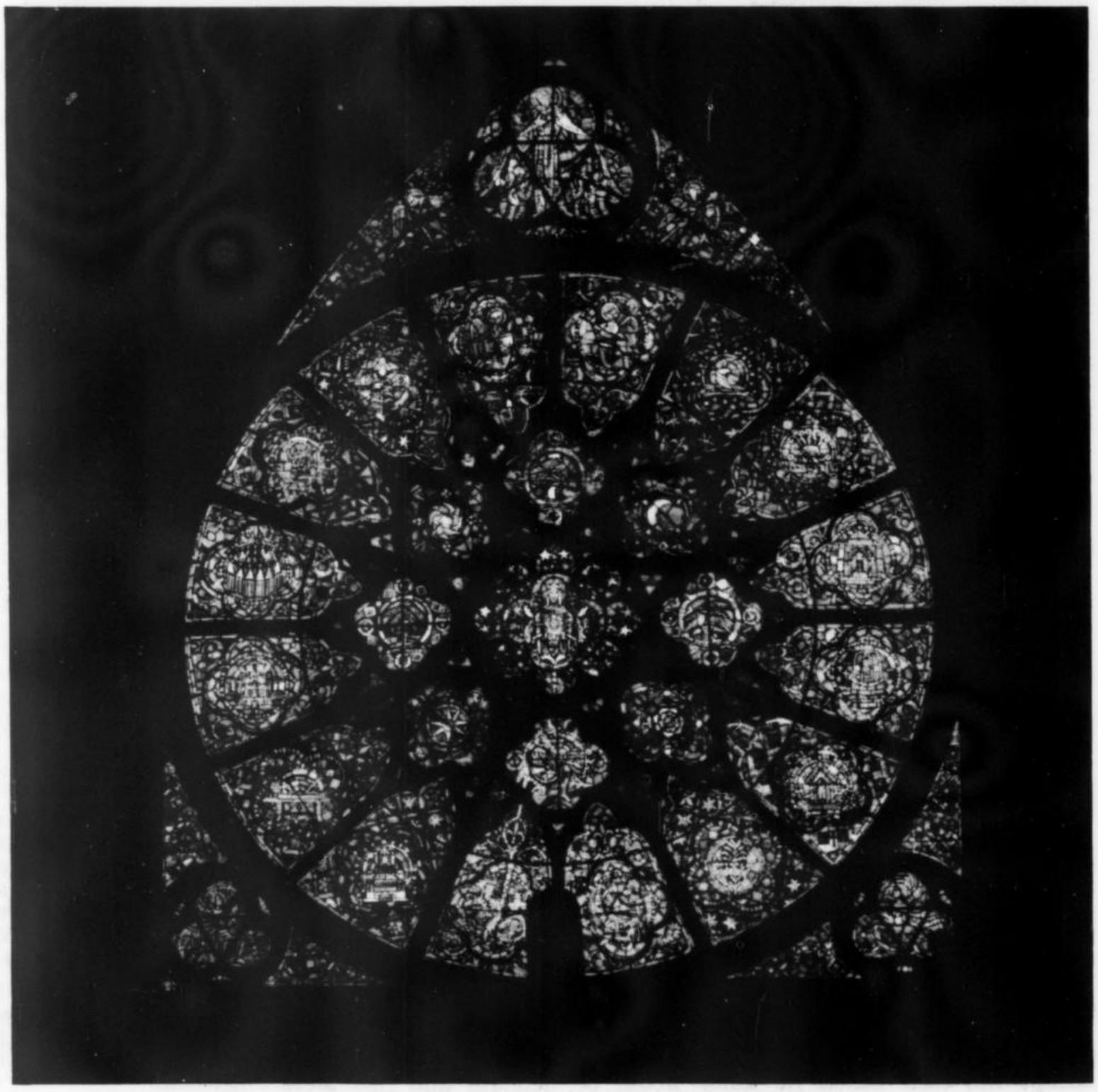


Photos © Paul Almasy, Paris

In the workshops where the ancient art of stained glass is still maintained today, over 1,400 different colour tones are used. Above left, Jacques-Paul Simon, who used 600,000 fragments of shattered glass as a basis for restoring the war-damaged windows of Reims Cathedral, examines some glass samples. Left, his daughter, Brigitte, works on a window that will be placed in the French church of Vitry-le-François. Above, Brigitte preparing a project for a



new window. She has executed windows based on designs of such well-known artists as Chagall, Joseph Sima, Braque Bissière and Villon. Below, the Simon family team in the workshop founded by their ancestor, Paul, in the 16th century. Right, the great south Rose Window in Reims Cathedral. An entirely new window, it was executed after the First World War by Jacques-Paul Simon, to replace a 16th-century window destroyed in a bombardment.



© Paul Almasy, Paris

Marc Chagall, at work on a series of windows for Metz Cathedral, is watched by Brigitte Simon and her husband, Charles Marq. This husband-and-wife team executed all the windows for the Synagogue in Jerusalem which were also designed by Marc Chagall.

STAINED GLASS *(Cont'd)*

Save the old & create the new

those of Pierre Simon in the 19th century and of Jacques-Paul, the present head of the family, in the 20th.

About 1830, Pierre Simon, who was then responsible for the upkeep of the stained glass in Reims Cathedral, decided to make records of every panel in these windows. He did so on paper applied directly to the panels which he had previously coated with a light oil paint—easily removable afterwards—in the appropriate tint. He thus obtained a complete record of the leads, the outlines of the figures and designs in the windows and even the half tones. The method also enabled him to work unhindered by opacities due to dirt or poor transparency.

All these records were carefully stored in the family archives and later, Pierre's son, Paul, completed his father's work by making a precise colour catalogue of every individual piece of glass.

A few years later all these records were an invaluable aid to the Simon family. In 1866 a great storm damaged the cathedral, shattering the great Rose Window above the central portal and leaving it full of gaping holes. From the detailed information collected by his father and himself, Paul Simon was able to make a perfect restoration of the damaged window.

Half a century later, a similar work of restoration, though on a much larger scale, was carried out by Jacques-Paul Simon, then at the start of his career. The First World War was raging and Reims was close to the front line. In April 1917 a violent bombardment shattered all the windows in the cathedral. When the war ended, the French Ministry of Fine Arts asked Jacques-Paul Simon if he thought it was possible to restore the windows.

After a long examination of the records collected by his father and grandfather the young man decided to accept the task which he knew would be delicate and arduous. He assembled a team of six craftsmen and set to work.

About 600,000 fragments of stained glass were collected from around the cathedral and within the building itself. Each window was slowly and painstakingly rebuilt with these fragments and areas of missing glass were replaced with new pieces painted in exactly the original tints. Altogether these artist-craftsmen reconstructed over 16,000 square feet of stained glass: eight windows in the nave, eight more in the transepts and a further eleven in the chancel. The results were greater than had ever been hoped, but the work took 20 years to complete.

During the same operation the team completely restored the rose window on the south side of the cathedral. This was the only window at Reims which did not date from the 13th century. The original 13th-century rose window was destroyed in a fire and was replaced in the 16th century by a craftsman named Nicholas Derodé. Jacques-Paul Simon created a completely new rose window based on the subject of the earlier work.

Remarkable new works have come from the Simon workshop since Brigitte and her husband have taken over its management. Brigitte herself has executed a modern-style stained glass window for the baptismal font chapel in the cathedral which offers new proof of her talents. In the church of St. Remy at Reims, Jacques-Paul Simon has executed a rose window in the north transept and Charles Marq has been responsible for a flamboyant window on the south facade of the same church.

Working from designs by the famous artist, Marc Chagall, this husband and wife team executed all the windows for the Synagogue in Jerusalem. Today they are engaged on a new series of Chagall-designed windows for Metz Cathedral.

THE HIDDEN FACE OF THE CINEMA (END)

THE USELESS BARRIERS

by Paul Léglise

In this, the fifth and final article condensed from a special world study describing lesser-known aspects of the cinema industry, Paul Léglise discusses some of the problems created by the international exchange of films and shows how Unesco and other organizations are helping to overcome various barriers to the free flow of films. The author is now working on a final chapter to be devoted to the future of the cinema. The Editors hope to publish portions of this text in a future issue.

THE movement of films across frontiers can do much to advance mutual understanding between peoples. Specifically, the cinema gives a direct stimulus to trade through its industrial, technical and agricultural films. A well-proved asset in the field of mass communication, it is able to bring home to vast audiences, through newsreels, documentary and information films of every kind, the significance and purpose of national and international projects for economic development. And, thanks to scientific, art and educational films, it plays an all-the-more decisive role in cultural exchanges.

The whole economy of the cinema, however, is dominated by the concept of the film as a form of entertainment. Films become consumer goods whose profitability depends largely on box-office returns in countries where they are imported.

National laws and regulations which affect international trade in films seek, in reality, to protect home-produced films and at the same time to encourage their export. These regulations, however, are applied indiscriminately to all classes of films. Today, efforts are being made to change this situation.

Firstly there is an increasing trend towards economic, technical and artistic co-operation of the kind mentioned in an earlier article in this series on international co-productions. Secondly, efforts are being made to place cultural, educational and scientific films in a special category to free them from obstacles that hinder their development and free movement across frontiers.

JUST over half the income of film companies in the U.S.A. comes from the export earnings of their productions. Roughly the same figure can be applied to most of the other major film-producing countries: 60% in Italy and 50% in the United Kingdom, for example.

These are significant figures and they have an equally important counterpart: the export of films leads to a corresponding increase in the circulation of foreign films within the exporting countries and a resulting decrease in the screening of national films on the home market.

From these facts alone we can recognize the importance of the problem and understand the two-fold reactions of governments anxious to facilitate world-wide export of their countries' films and to protect these films within their own frontiers. Some have enacted laws under which exported films receive financial help and others give subsidies to the organizations responsible for the distribution of their countries' films abroad.

The second kind of official reaction is the traditional protectionist kind that can take many forms. Of these the most long-standing are *customs duties* which protect home markets and contribute to national revenues. Through *exchange control* the State can keep an eye on all payments involving foreign currency as well as on the transfer of national capital abroad.

The most common form of control is the *import licence* which must be presented by any importer wishing to obtain foreign currency. This licence is not always delivered automatically, for restrictions can be imposed on the importation of certain articles according to their nature (films are a case in point) or to their origin. A ceiling is sometimes imposed on the amount of foreign currency that can be spent on certain imports. Finally, export licences enable a country to retain its essential resources, or to plan and control the flow of its foreign trade, encouraging exports towards hard-currency countries and placing restrictions on those with soft-currency countries.

UNESCO has carried out a systematic survey, country by country, of these methods in so far as they apply to

CONT'D ON NEXT PAGE

Dubbed films or sub-titles ?

educational, scientific, and cultural materials. The resulting report, "Trade Barriers to Knowledge" is of first-rate importance for everyone concerned with problems of international trade.

Protectionist action also takes the form of *quotas*. One type limits the number of import licences granted for foreign films; another requires cinema proprietors to show a certain number of nationally produced films during a specified period.

The import-quota system is simple to enforce: a stipulated number of foreign films is authorized for entry during a given period.

The internal-quota system was introduced for the first time in the United Kingdom in 1927, and gave a remarkable boost to the British film industry, whose annual production rose from 26 films to 128 within two years and reached 225 by 1937. The general principle of the internal-quota system is the one applied in France today: all cinemas must show French films for five weeks in every quarter. In the United Kingdom, 30% of the feature films shown in a cinema must be British (25% in the case of short films). In Italy, 100 days in every year are reserved for the screening of nationally-produced films chosen by a jury.

These restrictions on the free movement of films are thus justified by the desire of governments to make sure that film companies in their own countries are not deprived of the substantial revenue offered by the home market. But the walls of cinematographic protectionism are undermined to a certain extent by bilateral, and sometimes even by regional agreements for co-production and exchange which are stimulated by the obvious advantages to be gained from entering foreign markets.

Although international action aimed at bringing about the free circulation of educational, scientific, and cultural films is a real possibility, action of this sort becomes a much more complicated affair when it concerns the kind of commercial films usually shown in ordinary cinemas.

One of the greatest difficulties is language. An imported film must undergo transformation before it can be shown to audiences speaking a different language. Sub-titles are still the cheapest solution to this problem. But generally speaking audiences have been found to prefer to hear the dialogue or the commentary in their own language without having to read sub-titles at the moment when their attention should be focused on the picture. Nevertheless the true cinema lover by far prefers undubbed films which preserve the original voices and sounds of the film without distortion.

Dubbing, on the other hand, gives a film a greater commercial value, but costs far more. A mere translation is not enough. The dialogue must come as close as possible to the original text so as to avoid major discrepancies between the lip movements seen on the screen and the syllables that are actually spoken.

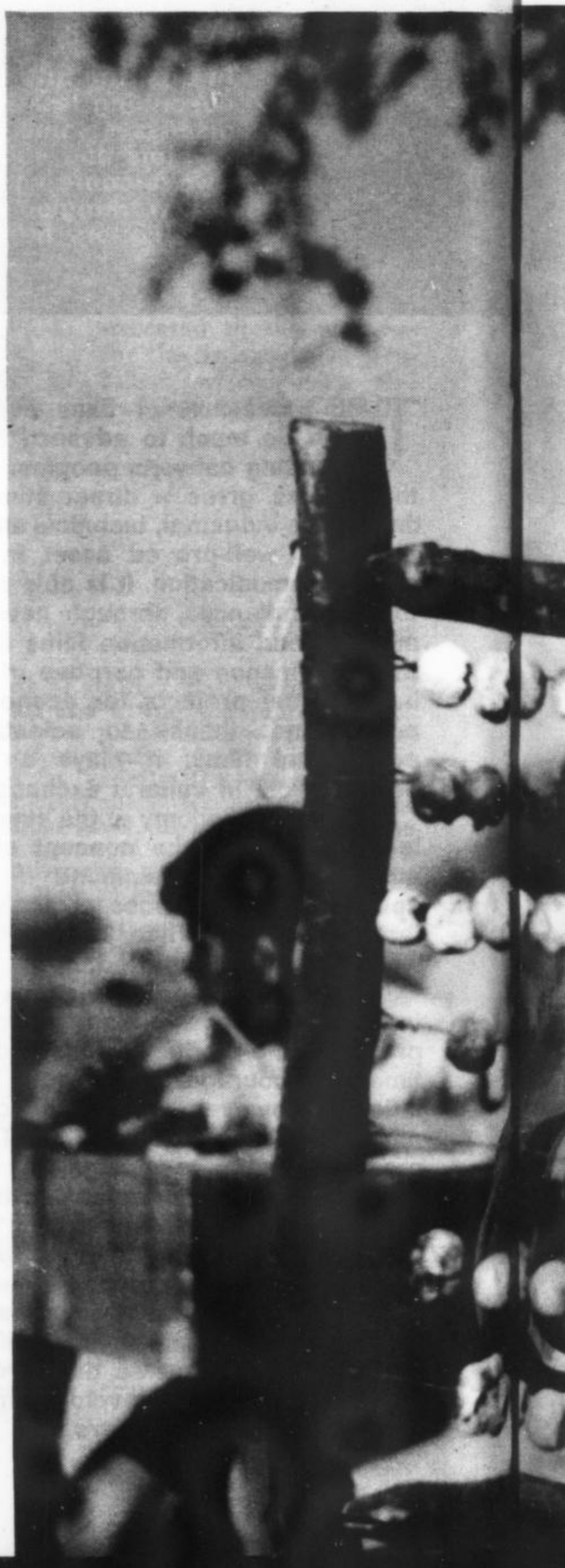
The complexity of this problem is soon brought home to us when we consider the number of languages spoken in the world. In India, films are dubbed in 13 different languages. Recording studios and laboratories carry out this work of post-synchronization in many countries. In some countries the dubbing of all imported films has been made compulsory in order to keep the teams of actors and technicians who do this work in full employment.

But what happens in countries in which technical facilities are lacking? Conferences held at Bangkok, Santiago, Paris, and in Chile were all obliged to go into this question. While the problem is less serious in Latin America than elsewhere thanks to common linguistic links there, it is very much more difficult to resolve in Africa or in South-East Asia. It has therefore been proposed that regional centres should be established and equipped to produce local versions of educational and documentary films.

These regional centres would also house the technical equipment needed for making film copies; or, failing this, would see that this work was done by existing services in different countries of the region on a co-operative basis. Lack of technical equipment is, in fact, another major barrier to the movement of films.

Therefore in order to facilitate exchanges of educational, scientific, and cultural films within these regions, Unesco has been asked to encourage countries with developed cinematographic services to place their laboratories at the disposal of others which have none.

One new difficulty has appeared in all countries during the last few years, as a result of the most recent development in film technology. This is the wide screen, or the "panoramic format." This has become very popular; moreover the use of 70mm film has made it possible to project onto very wide screens. The width of the



A scene from the Argentine film "Shunko", evoking problems of primary education in the rural areas of northern Argentina. Chilian director-actor, Lautaro Murua, is here seen as a schoolmaster, teaching Angel Greco (Shunko - the boy's name in Quechua) to count with the help of an improvized abacus. The film won first prize for the best Spanish-speaking film at the International Film Festival of Mar del Plata, Argentina in 1961.

From the film " Shunko "

projected image is twice, and sometimes even more than twice that of its height.

As a result, the old format now seems quite outdated. That is why many cinema proprietors use a wide screen at all times, even when they are showing standard-sized films which have not been expanded horizontally. In such cases, the projected image is considerably distorted.

There is, in fact, little co-ordination in the development of new cinematographic techniques, and there is no doubt that the introduction of new sound and picture processes, all demanding widely differing filming and screening techniques has led to a disquieting situation.

The image undergoes wide and indiscriminate modifications. As a result, the audience often sees on the screen something which bears little relationship with what the producer of the film wanted them to see: actors are shown with their feet or the tops of their heads cut off (and sometimes the subtitles are cut off, too); proportions are faulty, there is distortion at the sides of the picture; as for the so-called sterephonic effect, it often turns out to be mere cacophony.

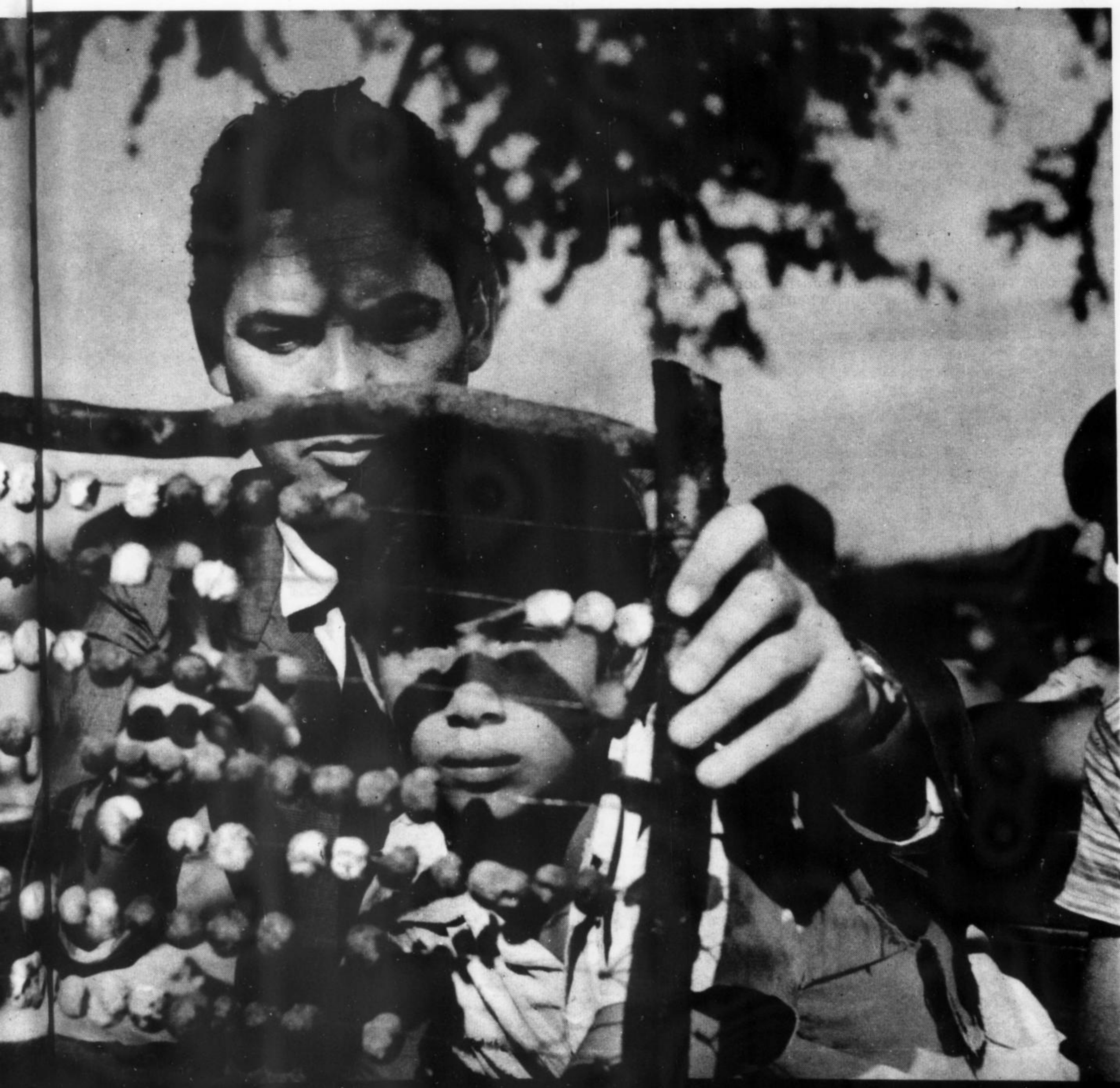
René Clair has said: "The cinema is on the decline when the universal character given to it fifty years ago is threatened by the existence of too many different systems. In these conditions, all progress is mere illusion. What is a landscape without the tops of trees, without sky and clouds? What is a palace without its ceilings?"

UNESCO realizes the cultural importance of this technical problem and at the 1958 General Conference, it referred to the International Cinema and Television Council the idea of studying the possibility of "an international instrument to secure standardization of prints of 35mm. cinematographic film."

The principles are virtually identical in the case of commercial shorts. The chief obstacle to the free circulation of such films is the way in which they are distributed and screened. They are chiefly used as programme fillers and they are usually obtained very cheaply, sometimes even without charge. Their prospects are thus closely linked with those of feature films and their production should be lower, or at any rate, not exceed that of feature films. In fact, more are produced than can be absorbed by the international market.

In France, the producer of a feature film is granted additional financial help when his film has been awarded a special mention, provided that a short film of similar

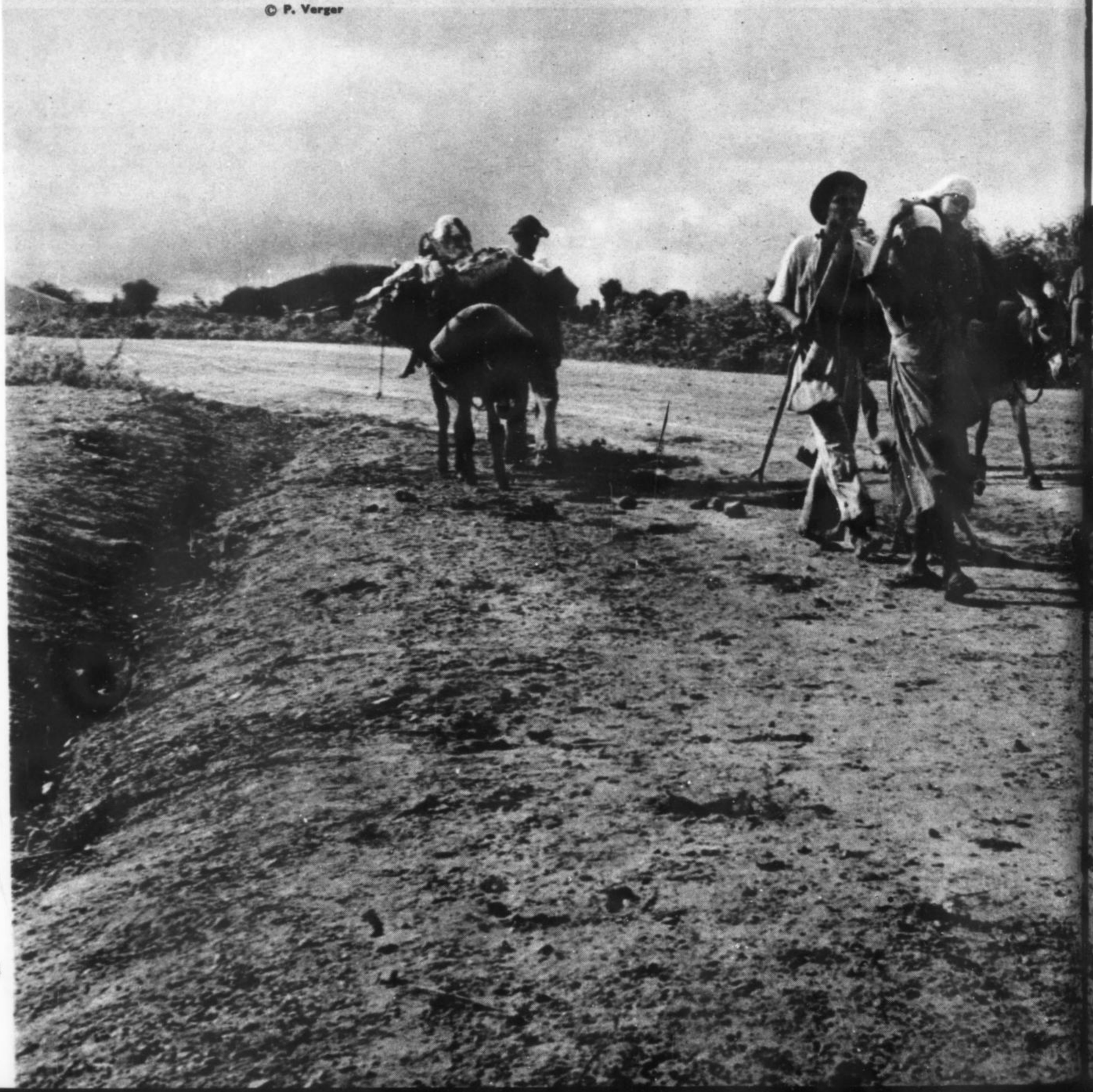
CONT'D ON PAGE 32



OPERAT

Drought and resulting famine periodically strike the *Sertao*, the backlands of northeastern Brazil, and are followed by a mass exodus from out of this parched land. Carrying only a few belongings, men, women and children set off down the roads leading to Brazil's more prosperous areas.

© P. Verger



Brazil's bold programme in the hunger campaign

ATION 'NORDESTE'

by Josué de Castro

There is more talk of hunger today than at any time in the past. Hunger, in fact, has become one of the great issues of our time. It almost seems as if it had never existed before—a calamity that only appeared in the 20th century.

This, of course, is a completely false impression. Hunger has always existed side by side with wealth and abundance. Neither hunger nor poverty are new facts in the world of today. What is new, as India's Prime Minister, Pandit Nehru, has told us, is that the hungry peoples have come to realize as never before the true facts of their condition and are showing a mounting impatience to be freed from the yoke of hunger and poverty.

It is the new awareness of the social and economic inequalities in the world now shown by these hungry millions—the so-called underdeveloped peoples—that has brought the problem to the fore—on the radio and in the press, in speeches by statesmen and on the agendas of world congresses and international meetings.

ONE of the chief and persistent causes of present-day social tensions is the world's economic disequilibrium and its resulting social inequalities. The deep economic gulf which separates economically-developed from underdeveloped countries is one of the greatest threats to world peace. Growing wider all the time it thus causes discord and fear and gives rise to political and ideological conflicts.

Economic inequality is the basic cause of innumerable other types of inequality which are often blamed on racial or climatic factors. It is responsible for a life expectancy in most underdeveloped regions of 30 years (in India, 27) whereas in countries of Europe and North America, life expectancy is 65—or more than twice as high. It has a decisive influence on the infantile mortality rate in the rich and the poor areas of the world. In some places this mortality rate rises to around 200 per thousand and yet in others it is only 30 per thousand—seven times lower.

The United Nations' "World Social Survey" highlights

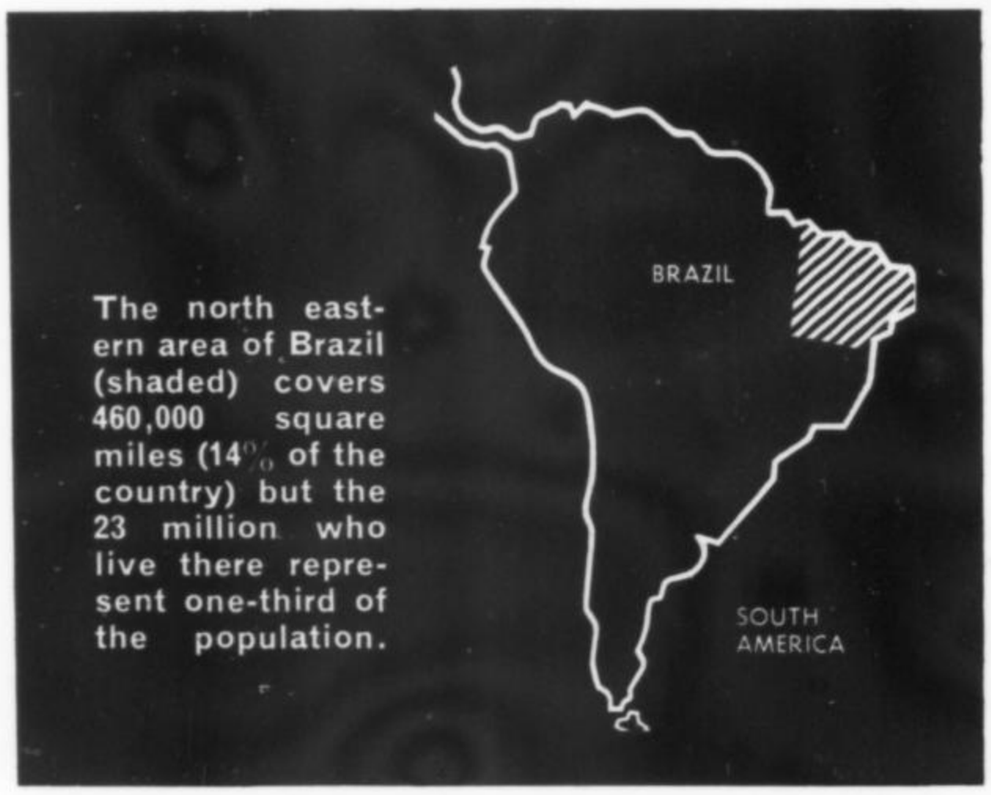
CONTD ON NEXT PAGE

A scheme to revitalize 1/7th of Brazil

clearly and in great detail the stark contrasts prevailing between prosperous and poverty-stricken countries. Facts and figures in every field from production to health, and from education to levels of consumption, reveal the precarious state of the underdeveloped regions.

But the most striking feature, the darkest and most constant blot on the economic and social condition of the underdeveloped regions, is the chronic, widespread hunger from which the mass of the people suffer—the "vast disinherited masses," as Tibor Mende has called them, whose only inheritance from generation to generation has been their unchanging share of hunger and wretchedness.

The very fact that huge concentration camps exist in time of peace—which is what the underdeveloped areas really are—underlines the sombre realities of our 20th century as gathered in the statistics of the U.N. Specialized Agencies—namely, that at least two-thirds of mankind live on a inadequate diet or in a state of chronic hunger. Out of the 2 1/2 thousand million individuals who live on our planet, almost 1,700 million have still not succeeded in escaping from the iron grip of hunger. Lamennais spoke the truth when he said that hunger was both the whip and chains for the slaves of our civilization.



The north eastern area of Brazil (shaded) covers 460,000 square miles (14% of the country) but the 23 million who live there represent one-third of the population.

THIS present world situation, expressed in the precise and unemotional language of statistics, was revealed to the 10th Conference of the Food and Agriculture Organization held in Rome in 1959. It led the Conference to approve a resolution, submitted by Dr. B. Sen, Director-General of FAO, for the launching of a World Freedom from Hunger Campaign, and calling on governments of FAO member states and national and international bodies concerned with social welfare to take part.

Approval of this FAO resolution is a victory for the ideas of a small group of pioneers who for years have fought to make the whole world recognize that here was a problem basic to mankind's future that must be faced. This resolution made it possible to break the silence of dominating majorities who had sought to stifle the cry of the hungry masses, to conceal the true facts of their everyday existence and to avoid even the mere mention of hunger.

Thanks to this resolution, the taboo surrounding hunger has been removed and a new era in international policy has begun: the struggle against the scourge of hunger is no longer a question of benevolent aid designed only to make the effects of hunger less intolerable and to prevent the explosive revolt of the hungry; it is a struggle which goes to the very root of the problem. This new philosophy of action is based on the premise that hunger is merely the biological expression of the whole complex of economic underdevelopment and that, in the final analysis, the struggle against hunger is part of the struggle against underdevelopment.

The first meeting in May 1960 of the campaign's advisory committee in Rome, at which the writer had the honour of presiding, approved a report in which there was the following passage: "The Campaign must attack the roots or basic causes of hunger in the world and not restrict itself to the adoption of palliatives." Thus, in 1960, began the ten-year period of the World Freedom From Hunger Campaign which was subsequently broadened by the United Nations resolution establishing the Development Decade, one of the basic aims of which is the struggle against hunger.

IT is an immense task to eliminate a worldwide scourge with roots deeply embedded in the soil of the socio-economic structures prevailing throughout most of the globe. With the limited resources available to the United Nations, it is obvious that the problem cannot be attacked simultaneously in its full range and in every region where it exists.

It therefore seemed preferable to establish the campaign's precise philosophy of action and to launch a limited number of regional plans or pilot projects.

During the 1961 FAO general conference we suggested the use of northeastern Brazil as a pilot area for the campaign and the reasons we gave led the FAO to accept this proposal made by the Brazilian Government. The result has been closer co-operation between FAO and Brazil aimed at eliminating the scourge of hunger from northeastern Brazil through a realistic development of the region.

To understand why we considered the *Nordeste* as an appropriate pilot zone for the campaign against hunger and proposed its choice to FAO, one needs to take a look at the geo-economic characteristics of the region.

Northeastern Brazil comprises an area of 1,200,000 square kilometres (460,000 sq. miles, or 14% of the whole country) stretching from the State of Bahia to the State of Maranhao. The region is neither geographically homogeneous nor has it a clearcut geo-economic unity. It comprises two typical and complementary regions: the eastern Northeast and the western or central Northeast.

The eastern Northeast consists of a narrow stretch of land near the coast with an average width of 50 miles; the soil is dense and fertile and the climate is distinguished by regular and abundant rainfalls. Sugarcane monoculture has developed on this strip of land, wiping out the forests which once covered it and occupying every inch of arable land with terrifying thoroughness.

It is in this area that the sugar industry has been established on the basis of monoculture and large estates, an industry which, via a feudal land system and slavery,

CONT'D ON PAGE 29

DROUGHT & OVERPOPULATION

tonio Ronek © O Cruzeiro, Rio de Janeiro

© P. Verger

Much of northeastern Brazil is an unsmiling land, a spiney wilderness of twisted dwarf shrubs surrounded by cactuses (left). Overpopulation is another serious problem in this "Polygon of Drought". Young men on a railway station platform (below) are migrating "Retirantes" waiting for a train to take them to more fortunate regions where they may find jobs. Farming here is always at the mercy of the weather. One long-established activity is cultivation of small shrubs (being harvested, above) the fibre of whose stem is dried and turned into sacking, ropes and nets.

sé Pinto © O Cruzeiro, Rio de Janeiro

FAO

A 10-point guide for development

now forms the basis of the region's economy while at the same time completely upsetting the regional economy as a whole and preventing any possibility of other types of cultivation.

The other Northeast—the central or western—consists of semi-arid land known as the *Sertao*. This is the "polygon of drought," periodically subject to a complete absence of rain or to inadequate rainfalls which disorganize the region's entire economy and thus bring epidemics of hunger during the drought seasons. The economy of this sector is based on cattle-raising and cotton-growing together with food polyculture which, in rainy years, makes it possible to provide a well-balanced diet.

THE 23 million people who live in the Northeast —one-third of Brazil's total population—have a very low standard of living. The average gross per capita income in Brazil is 320 dollars; in the Northeast it is only 100 dollars. This is the largest population group in Latin America to have such low productivity and so small an income. Thus, while Brazil can point to some remarkable advances, this northeastern region continues to be widely regarded as a problem area, since there hunger remains a pitiless scourge.

In fact, the Northeast suffers from two types of hunger. The sugar-growing region is plagued by chronic hunger caused by a lack or insufficiency of various elements in the everyday diet which is based on manioc and beans. The affliction of the *Sertao* region is acute hunger, epidemics of hunger provoked periodically by periods of drought.

This dismal picture of the northeastern economy has given many people the impression that the Northeast, with its complex and unfavourable geo-economic situation, can never be reclaimed. Nothing could be further from the truth, and more void of scientific reason than this hasty and pessimistic interpretation of the Northeast's economy. The hunger and poverty of the Northeast are not attributable to natural conditions—to basically poor physical characteristics—but rather to the deformations and errors that accompanied its economic exploitation.

This is proved by the surveys and research in economic semiology which have been carried out with scrupulous scientific care. The ills of the Northeast are structural ills whose origin lies in the colonial-type exploitation, in the monoculture and large estates. Some of the original social characteristics of these large land holdings which the Portuguese colonists established there four centuries ago still survive today.

Surveys carried out by SUDENE, an organization set up specifically to assist the development of the Northeast by integrating its economically marginal population in the national economic system, leave no room for doubt on this point. The great difficulty in the Northeast is not, as has so long been claimed, the intermittent phenomenon of drought but the archaic feudal structure of the system of agrarian ownership which results in both the failure to use the region's natural resources and to the non-employment of the working capacity of the northeastern population.

It would be difficult to find any other regions in the world so well-suited to a pilot experiment in the struggle against hunger as northeastern Brazil. It is a thickly populated area, in which different types of hunger are rife and the situation there is socially explosive because the population has become aware of the reasons for its sufferings. It is also suitable because it has potentialities for recovery and possesses technical organizations like SUDENE which are equipped to carry out properly planned large-scale projects. To this array of factors favouring the experiment we may add the fact that several years ago, at our instigation, a plan for the struggle against hunger was initiated in this region through the World Association for the Campaign Against Hunger (ASCOFAM).

Unesco - E. Aubert de la Rue

PHOTO LEFT is not the bombardment of some lunar landscape but heavy rain falling on soil, loosening and lifting it, and thus making it more vulnerable to erosion. Northeastern Brazil's real plague is irregularity of rainfall rather than a dearth. When the rains come they fall in torrents and bring a quick harvest... but they also wash away huge quantities of topsoil, leaving a parched eroded surface like the one shown above.

WITHIN the framework of the present experiment, here, broadly, is what has already been done and what is planned for the years ahead. In Brazil, ASCOFAM has concentrated its work on the Northeast, dividing its efforts between a broad educational programme as well as the shaping of a practical philosophy of action, and the execution of projects designed to stimulate the public response vital to any attempt to transform the economy of the region.

Let us examine some of these activities in both sectors. ASCOFAM initiated surveys and research on the agrarian structure of the Northeast and its effect on the economic and food situation of the region. On the basis of these surveys, it even drew up an economic plan for agrarian reform in the region, including the total investments this would require. It organized seminars on regional problems, including one on endemic diseases in rural areas and undernourishment. The basic conclusions of this seminar which took place in 1958 with the participation of outstanding scientists, deserve to be widely publicized. They present an analysis of the correlation between the problem of endemic diseases and the problem of hunger in underdeveloped regions with an objectivity which makes them valid for any underdeveloped region in the world.

These are the 10-point conclusions reached at the seminar:

"1. The current socio-economic situation of the Northeast, resulting from the serious mistakes made over many

CONT'D ON NEXT PAGE

Peaceful upheaval in the backlands

years, is primarily responsible for the deficient diet of the population and has thereby helped to aggravate the endemic diseases prevailing there.

2. The bulk of endemic diseases cannot be eliminated without changing the socio-economic structure and dietary habits.

3. Aid programmes and public health programmes, while essential, do not generally provide results any more lasting than long-term social objectives unless parallel action is taken to change the socio-economic infrastructure and the dietary conditions of the people.

4. The Northeast must be incorporated in the national economy and has need of public and private action capable of raising the economic level and improving the distribution of wealth.

5. The regional phenomenon of drought, although serious, cannot in the light of the present level of technology and science be claimed as the main factor in the Northeast's economic stagnation.

6. The productivity levels for the Northeast must be raised as a matter of urgency in order to improve health standards and overcome the incidence of regional endemic diseases.

7. Under-capitalization and under-employment are major obstacles to the rational exploitation of the Northeast's wealth and potentialities and, coupled with the bad distribution of agricultural property, are serious handicaps to production, acting as a brake on the region's agricultural economy.

8. Sugar-cane monoculture, because of the form it takes and despite the wealth it produces, is a serious negative element in the social and dietary imbalance of the peoples in the Northeast.

9. Emergency projects and action can only relieve specific situations of a temporary or catastrophic kind but will not lead to permanent results.

10. Industry and agriculture in the Northeast should not be regarded as conflicting activities but both require technical organization and financial assistance to reduce production costs, to create and expand markets and to ensure that useful individual man-power is fully occupied and thus ensure the firm establishment of the north-eastern peoples."

Chile's commemorative stamp, depicting mother protectively cradling her emaciated child in her arms, symbolizes sufferings of millions of children.

Rice harvesting and threshing of the white grains that are staple food of half the world's people are subjects of campaign stamps from Laos and Viet-Nam.

As part of its programme to turn Brazilian and world attention to the problem of the Northeast, ASCOFAM has produced a film entitled "The Tragedy of Drought." This presents an eloquent picture of the social reality of the semi-arid Northeast and points to the possibility of solving this regional problem through the struggle against drought and hunger.

ASCOFAM's main achievement, however, has been the artificial enrichment of the region's basic foodstuff—manioc flour—by the addition of proteins and mineral salts. Three small pilot factories set up in northeastern Brazil turn the flour—the sole source of hydrocarbons and calories—into a foodstuff rich in acids, mineral salts and certain vitamins. The process is economical and practical and thus helps to combat habitual diet deficiencies of the region.

A year-long experiment carried out in the town of Surubim, one among the main centres of endemic pellagra, revealed that the general use of this enriched flour virtually banished this deficiency disease from the region.

Enrichment of manioc flour has so far been effected on the basis of fat-free soya flour and a mixture of salts and vitamins but ASCOFAM is currently studying a still more practical and rational process which consists of the addition to the usual manioc flour, made from the plant's roots, of a flour made from the actual leaves of the manioc which contain some 20% of proteins and which have a high content of betacarotine (provitamine A).

Efforts are now being turned to a total utilization of manioc through a project to be carried out in the town of Nazareth, a semi-urban, semi-rural community which is typical of the sugar monoculture region.

In this selected pilot area, techniques, relatively simple but capable of greatly increasing the region's well-being, will be used to develop production of certain items, mainly foodstuffs, to increase and improve basic services in the fields of health and education and to develop available social capital.

In short, the Nazareth project consists of mobilizing within this experimental area all the unused or inadequately used local production resources, primarily labour, land, building materials and a certain physical capital such as tools, working animals, etc.

Once the results of this experiment have been collected and collated, they will be passed to other national and international groups which are looking for co-operation techniques capable of promoting community develop-

STAMPS AGAINST HUNGER

On this page we present a selection of the special stamps marking Freedom from Hunger Week, mid-point in the five-year, world-wide crusade of the U. N. Food and Agriculture Organization to improve production and distribution of food supplies. Commemorative stamps were issued by over 140 postal administrations on or around March 21. The double purpose of the international stamp plan was to publicize the gravity of the world hunger situation and to enable people everywhere to identify themselves with the Campaign. Stamps shown here and others issued in support of the Campaign can be obtained from the Unesco Philatelic Service, Place de Fontenoy, Paris (7).

Special French stamp incorporates, as do most other issues, heads of wheat, symbolizing FAO's concern with raising nutritional standards the world.

Mali's efforts to raise food production through improved farming methods are recalled in design of this stamp.

Nutritional needs of children are also emphasized in this stamp from Finland. It bears Campaign slogan in Finnish and Swedish, Finland's official languages.

Stamp above depicting a child, eagerly drinking his milk, has been issued by Argentina. The drawing was inspired by photo (right) taken by Paul Almasy and published on the back cover of the special Freedom from Hunger (July-August 1962) issue of The Unesco Courier. Argentina has lithographed over two million.

ment in other areas afflicted by similar problems.

In addition, FAO, in co-operation with UNICEF (the United Nations Children's Fund) is carrying out a programme of dietary education in the Northeast. This aims to introduce improved dietary habits and to encourage the production, preservation and better use of foodstuffs possessing a high nutritive value. Several other projects are now being examined by the World Food Programme which might contribute, as a form of investment capital, some of the food for workers engaged in these development projects.

SUDENE has now laid down as one of its objectives the improvement of food resources in the region, thus contributing to the direct struggle against hunger and undernourishment. SUDENE'S activity includes the following projects: redistribution of the population so as to make better use of surplus manpower in certain areas, encouragement of stock-breeding by increasing the quantity of fodder plants adapted to the ecological conditions of the region, a programme of agricultural expansion and improvement of production by gradual changeover to new products.

In co-operation with the programmes of the Alliance for Progress and other international bodies, SUDENE co-ordinates many activities designed to combat hunger in the region.

FAO has already sent a technical commission to the Northeast to survey this experiment. Many of the resolutions adopted by the last FAO regional conference for Latin America, in Rio de Janeiro, related to problems of agricultural structure, and the Brazilian Government has taken account of these in its recovery plan for the economic and food resources in the Northeast.

Northeastern Brazil is today being watched by the world whose interest has been drawn to this geographical area by the obvious complexity of its problems, the surprising vitality of its people and the social tensions which threaten it internally. It may render the world an inestimable service since it is the scene of a peaceful revolution in which the application of science, technology and planning will make it possible to uproot the scourge of hunger, the most characteristic feature of economic and social underdevelopment.

JOSUE DE CASTRO, the distinguished Brazilian nutritionist, is President of the Association for the World Campaign Against Hunger, and a former President of the Council of the U.N. Food and Agriculture Organization. He is the author of many works on the problems of food production and nutrition, of which the best known is "The Geography of Hunger." He is now chief of the Brazilian permanent delegation to the international organizations in Geneva with the rank of ambassador.

Top priority freedom for films

category is always shown on the same programme during the first three years of the feature film's life. This boils down to saying that only those short films which have received an award stand a chance of being chosen to accompany a French feature film. In Italy and in Argentina, short films in the top category have a certain number of days set aside every year for them alone. In Italy, the minimum number of days is 180.

In Argentina, category "A" films which are not taken up by any cinema proprietor within one month are allocated by lot to certain cinemas which are obliged to show them. The aim is to keep down the number of home-produced films to reasonable proportions, thus ensuring an improvement in their quality.

What are the general characteristics of international trade in newsreels? Most of such trade is subject-matter (i.e. sequences dealing with a particular event or subject included in a newsreel). There is rarely a market for a complete newsreel, for not all the items even in a special national edition would appeal to local tastes. Most newsreel firms have trade agreements by subject with their colleagues in other countries.

UNESCO keeps a watchful eye on all problems to do with educational, scientific, and cultural films. When all the immense and varied difficulties that must be overcome before international agreements applicable all over the world can be reached are taken into account, there are indeed grounds for satisfaction with results achieved.

In 1961, when it received the report on international relations and exchanges in the fields of education. science. and culture prepared for the U.N. Economic and Social Council, UNESCO's Executive Board pointed out that these international contacts, apart from their general aim of developing peaceful relationships between nations, had two no less important objectives:

1. The organization between nations of exchanges of persons, information, knowledge, ideas and equipment; and

2. To enable the more fortunate and better equipped nations to aid the less privileged ones.

This general aim and this double objective are an intrinsic part of UNESCO's action in the field of educational, scientific, and cultural films. Permanent contacts have also now been established between UNESCO and international organizations concerned with the cinema, thanks to the creation of the International Film and Television Council.

UNESCO has already achieved some impressive results in the field of international agreements for the circulation of objects of educational, scientific, or cultural interest. Films benefit from the many facilities which have been obtained in this way.

UNESCO has adopted an international instrument, known as the Florence Agreement, which facilitates the free circulation of books, publications and educational, scientific and cultural materials.

Films which meet these conditions are covered by the agreement, which provides for exemption from customs duties and from certain import dues; it also makes provision, as far as possible, for the granting of foreign exchange and import licences.

Certain limitations, however, are imposed on the scope of the convention where films are concerned. Films must be imported only by organizations approved by the competent authorities of the importing country for the purpose of duty free admission of such material and may only be exhibited by the approved organizations; in practice, this means that the films in question can be used only for non-commercial purposes.

The other important international agreement adopted by UNESCO, the Beirut Agreement, facilitates the international circulation of visual and auditory material of an educational, scientific and cultural character. This instrument differs from the preceding one in that 1) it applies only to visual and auditory materials, 2) it grants exemption not only from customs duties but from quantitive restrictions on imports and the need to apply for import licences, and 3) in general, it does much to reduce difficulties arising from the international circulation of educational, scientific, and cultural films, even when these are shown commercially.

Three drafts which were drawn up by the Customs Co-operation Council in conjunction with UNESCO were adopted by this Council in 1961. These new provisions supplement the measures already adopted concerning *temporary importation*. Temporary importation is an arrangement by which states allow educational, cultural, and scientific films to enter a country and suspend the application of customs duties for a limited period.

WHAT are these new agreements? First of all, there is one which makes use of international carnets to exempt importers from a large number of formalities to which they were previously subject. Secondly, all professional and cinematographic equipment needed for film-making in a foreign country has been brought within the scope of temporary importation regulations. The third agreement concerns the temporary importation of material for international exhibitions.

International trade is controlled by agreements of a worldwide, regional, or bilateral nature. There are other agreements which deal specifically with cultural exchanges. Rather than describe these in detail, or make an analysis of their application to the international cinematographic trade, let us simply take a brief look at the general way in which they work.

The General Agreement on Trade and Tariffs (G.A.T.T.), which came into operation in 1948, has turned out to be one of the most decisive steps in freeing international trade from hampering restrictions.

Through it, the quota system has been considerably reduced in many countries, and many categories of articles, particularly those of an educational, scientific, or cultural nature, have been freed from various forms of control. For example, during a conference held at Geneva in 1956, UNESCO asked that tariff reductions should be granted on a series of articles and many countries agreed, and on films in particular.

There are also regional agreements affecting film exchanges. The European Economic Community, better known as the Common Market, was established by the Treaty of Rome. This treaty is concerned particularly with the economic aspects of European trade, and for its purposes films are treated as trade commodities.

In our field, therefore, the aim of the treaty is the integration of the film industry on Common Market lines, the implication being that national help and fiscal charges will be brought into line and trade made easier.

In other parts of the world, there are regional agreements which make a similar attempt to create economic communities or to establish the foundations of cultural co-operation. One example, is the Council for Mutual Economic Aid which brings together countries having a socialist economy, although films do not seem to play an important role here. Amongst regional agreements with a more pronounced cultural nature, is the convention signed by the members of the Organization of American States with a view to encouraging inter-American cultural relationships, and also the activities of the Cultural Committee of the Nordic Council (Nordisk Kulturkommission).

This brief survey of the different agreements covering cinematographic exchanges highlights the importance of the problems involved and the extent of the interest shown in them by national authorities as well as by regional and international bodies.

Films, as consumer goods, follow the general trends of trade liberalization. But as intellectual and culture products, they deserve an even more rapid liberation on a world-wide scale—a top-priority freedom.

Letters to the Editor

PROS AND CONS OF ESPERANTO

Ed. note: We have received a voluminous correspondence following the publication of Robert H. J. van Kuyk's letter on the drawbacks of Esperanto (March issue). Space permits us to publish only excerpts from a few:

Sir,

Mr. van Kuyk's conception of the role of Esperanto is much too limited, and it is not clear whether he thinks we must learn all the great languages (virtually an impossibility) or only one or another of them (which would still leave vast numbers of people without a common language.) It would be unwise to give much weight to opinions expressed by one who reasons that because Esperanto removes the need to learn other languages, therefore it prevents one learning them !

C.M. Cather
Torquay, England

Sir,

Offering an excuse for Mr. van Kuyk I would say that he has never had the occasion to work in the field of experience available daily to a teacher. He was lucky enough to be born in the Netherlands—it is a well-known fact that the Dutch people are traditionally more or less polyglot—and he is also blessed with rather rare and special natural gifts—qualities with which he seems to believe his fellows are equally well endowed.

If he was in daily contact, as we teachers are, with hundreds of children and adolescents he would soon realize what an effort the average pupil has to make even to be able, at the moment of his "Baccalaureat", to stammer out a few phrases of a language learned during seven years in a secondary school... If he had this experience he would not say with such assurance "it is far better to learn languages like English, Russian and Chinese..." And what about the millions of adults in the world who have never set foot inside a secondary school?

P. Dennis
Bar-le-Duc, France

Sir,

Mr. van Kuyk's objections have long been refuted. I need only quote the famous Danish linguist Otto Jespersen who—as early as 1928—wrote: "An objection which is often raised against constructed languages is that they can never be as good as natural languages. It is true that our Interlanguage is not as rich as English, not as elegant as French, not as vigorous as German, not as beautiful as Italian, not as full of nuances as Russian, not as 'homelike' as our mother-tongue. But note this well, that all these good qualities, which one appreciates and praises in the national languages, are found only when they are spoken or written by natives. And the Interlanguage may very easily be richer than the English spoken by a Frenchman, more elegant than French as spoken by a Dane, more vigorous than the German of some Italians, more beautiful than the Italian of the English, more full of nuances than the Russian of the Germans, and more homelike than my own tongue spoken by Russians. And as our language is an auxiliary language, it can only be compared fairly with natural languages as usually spoken by foreigners." —*An International Language,* London, Allen and Unwin.

Dr. S.M. Auerbach
London, England

Sir,

Esperanto is drawn from the same roots as the world's living languages and is an outgrowth of them. Nothing could be more false than to describe it as an "artificial" language. It is in fact a living link between other languages. Congresses of young Esperantists coming from many countries are an undeniable proof of this.

René Llech-Walter
Perpignan, France

Sir,

How can such people as a farm worker in the Massif Central (or Lower Saxony) a postman in the Pyrenees (or Croatia), a housewife in Britanny (or one in Sicily or Norway) learn languages "like English, Russian, Chinese, Arabic"—even supposing they wanted to?

F. Lenz
Paris, France

Sir,

I support Mr. R.H.J. van Kuyk.

Learning a real language is an exciting adventure into another culture; one learns of the climate, scenery, history, arts, institutions, philosophies, religions, and daily problems and customs of the people. Surely, these are the very things we want to understand! If I may exaggerate a little, Esperanto is rather like a catalogue compared with real languages. It is better to learn mere smatterings of several than to waste time on it. Arriving in a foreign country for work or for pleasure, how much more enjoyable and more friendly to try to share a little in the normal social life and culture than to confine oneself to Esperanto!

Most languages seem to have some unnecessary difficulties which are only perpetuated by the tireless and misguided efforts of teachers. They seem to serve only as a barrier, showing up the so-called "well-educated" from others who may, in fact, be better educated in more worth-while aspects of language and life. Dropping this pedantry, perhaps in twenty years three-quarters of school-leavers could have some knowledge of about five other languages, about one-quarter speaking them fairly fluently, with many skilled linguists becoming available for exacting work.

B.M. Johns
Cambridge, England

CO-AUTHORSHIP IN FILMS

Sir,

My article describing the machinery for distributing films in the world (The Hidden Face of the Cinema Pt.2 - January 1963 issue) included a brief explanation of how copyright is applied to films. From this simplified definition readers may have gained the impression that this was a universally accepted idea synthesizing various current practices in the world today. However, on the question of "authorship" the long-standing disagreement, which I briefly evoked, between the notion of the producer as an "author" of a film and as an "intellectual creator" is still not settled today and still involves multiple shades of meaning. The correct balance between these two conceptions seems to have been adopted in a French law of 1947 which considers a producer as co-author of the film only when he can be said to have made an intellectually creative contribution towards it. But the problem is too complex to be explained in the few lines I was able to devote to it and which simply touched on the subject. The ideal international solution has not yet come forth. Let us hope that one will soon be produced.

Paul Léglise
Paris, France

RUDOLF STEINER'S NATIONALITY

Sir,

In your February 1963 issue you refer to Rudolf Steiner as "the German philosopher and educator". Steiner was, in fact, born at Kraljevic, on the Austro-Hungarian frontier, on February 27, 1861. The tremendous scope of the work he accomplished in so many fields during his short life is presented in "Rudolf Steiner", a booklet published for his centenary exhibition in 1961 and edited by the Goetheanum, in Dornach, Switzerland.

Marguerite Bourdier
Rome, Italy

Ed. note: Our reader is correct. Rudolf Steiner was, in fact, Austrian.

GREAT ILLS IGNORED

Sir,

My only complaint regarding your magazine is that you give too much space to information on the Arab countries and tend to neglect such great ills of our time as alcoholism, prostitution and juvenile delinquency. I would suggest that you visit the institution at Lannemezan in the Hautes-Pyrénées department. You will find enough material there to fill a very interesting issue.

E. Haro
Pau, France

From the Unesco Newsroom...

POWER LINE AIR SPIES: Airborne inspection of Sweden's 20,000 miles of overhead power lines has reduced costs by 50% compared with conventional ground patrol inspection. Flying at tree-top height in helicopters or light planes, the inspectors dictate their observations to portable tape-recorders.

FOR AFRICA'S NEW TEACHERS: Nearly 300 fellowships providing training for teaching staff in African universities will be granted under UNESCO's 1963-64 fellowhip programme. They will be available in 22 UNESCO Member States, offering theoretical and practical study at the university level in science, social science, the humanities and mass communications.

MIDDLE EAST QUESTS: The search for the early origins of civilization will this year take archæologists from the Oriental Institute of the University of Chicago to four ancient sites in the Near and Middle East. They will be investigating how man the hunter lived in central and southern Turkey 11,000 years ago and how Christianity moved from Palestine to Mesopotamia in the 6th century. Two other sites to be studied are an ancient town in Iran, Jundi Shapur, and Khirbat al Kerak in Israel, where remains dating from the third millenium B.C. have been found beneath a 5th century A.D. Byzantine church.

CASTLE ART TROVE: Fifty lost paintings including masterpieces by Tintoretto, Rubens and Veronese have been found in a dusty attic of Prague Castle. They are part of the collection of Rudolf II, which was dispersed in the 17th and 18th centuries. The works remaining in Prague were hitherto assumed to be only minor ones.

DESERT LABORATORY: Scientists from the University of California are using a stretch of desert 15 miles square as a research laboratory to study the evolution of plants and animals in arid regions. In this "living laboratory", with no buildings or complicated scientific equipment, scientists are seeking the answers to such questions as how desert animals live and adapt themselves to the conditions of heat and drought.

LIBRARY SERVING THE BLIND: Delhi Public Library, established by UNESCO and the Indian Government as a model for South Asia in 1951, has now opened a Braille section for blind readers. Another activity it has greatly developed is the publication of booklets for new literates. Stocks of the first 36 titles of these booklets were soon sold out.

EAST-WEST MIMES ON FILM: A documentary film, "The Language of Movement-Mimes of East and West", made by UNESCO as part of its East-West major project to encourage mutual appreciation of cultural values, is available to TV stations all over the world. Mimes and dances from eight countries—Italy, France, Turkey, India, Japan, Poland, USA, Netherlands—offer a convincing display of the universality of this art.

PACT AGAINST DISCRIMINATION: The Convention designed to combat discrimination in education—adopted in 1960 by the UNESCO General Conference—has now been ratified by Kuwait, New Zealand and Czechoslovakia. This brings to 15 the number of countries that have ratified the Convention which entered into force in May 1962.

SOLAR BATTERY POWER: A silicon solar battery designed by a Soviet scientist at the Uzbekistan Institute of Physical Technology has developed a power of 150 watts although it has a surface of only four square feet. This remarkable achievement in solar engineering has been obtained by increasing ten-fold the concentration of the sun's rays falling on the battery surface through mirror focusing. This solar power station powers a pump which in one hour can raise over 1,300 gallons of water to a height of 20 feet.

NEW FARMING FOR NIGERIA: Today nearly 60,000 young men are being trained in modern farming methods under a scheme launched by the Government of West Nigeria in co-operation with the U.N. Food and Agriculture Organization. Farm institutes and settlements are being created where newly-trained young men become tenants of a "farm unit" growing such crops as cassava, yams, sorghum, maize, peas, beans, cocoa, rubber, oil palm and coconuts. Each settlement or village consists of about 200 families and is organized on a co-operative basis.

OUR UNCHARTED PLANET: Sixty scientists from forty countries—the Commission for the Geological Map of the World—who met in UNESCO House recently approved plans to go ahead with the preparation of a world geological atlas which is to be published with UNESCO's aid. Their meeting was a reminder that while we are looking into outer space, we still do not possess a unified map of the world's sub-soil.

VACATIONS ABROAD: Hundreds of choices for unusual holidays offered by over 1,000 organizations and institutions in 81 countries are listed in the 15th edition of UNESCO's "Vacations Abroad" (*). They range from opportunities to learn a new language (open to almost everyone) to conducting orchestras, for which a conservatory education is required.

---

* *Vacations Abroad XV*, 1963, *Unesco, Place de Fontenoy, Paris* (7e). *Price* : 6/ - (*stg*), $1.75 ; 4.50 *F*.

REAPPEARING AMERICANS: The Indian population in the United States reached its lowest point at the end of the 19th century but since then has made a steady comeback. During the past 30 years it has increased about sixty per cent to well over half a million.

400 MILLION RADIOS: Nearly 70 per cent of the world's people, most of them in Africa, Asia and Latin America, lack receivers to pick up even local radio broadcasts. Over 400 million additional sets, according to a UNESCO estimate, would be needed to provide a receiver for each family in these regions. To meet this need the International Telecommunication Union and UNESCO have jointly studied the designing of transistorized receivers which could be mass produced for the developing countries for as little as $ 5.00.

STOCKTAKING AT SEA: Two French trawlers equipped as floating laboratories will set out this year on a fishing expedition to take stock of the marine resources of the Gulf of Guinea as potential food supplies for Africa. Carrying international teams of scientists, they will cover 5,600 miles over the African continental shelf during two cruises this year and next. In addition to taking meteorological and hydrological observations, the ships will sweep the sea bottom at intervals of thirty or forty miles to take a census of its population.

MUSIC IN EDUCATION: Musicologists, musicians, composers and music educators from all over the world will be meeting in Tokyo in July to discuss contemporary trends and developments in music and music education in both Orient and Occident. They will be attending the Fifth International Congress on Music Education.

Flashes...

■ *Mexico has launched an eleven-year plan to expand education at all levels and is now devoting 22% of the federal budget to education.*

■ *Fatal road accidents are on the increase all over the world with the exception of the United States where the trend has been reversed, reports the World Health Organization.*

■ *Unesco Coupons—an international medium of exchange, enabling, "soft" currency countries to buy educational, scientific and cultural equipment in "hard" currency areas—have now made possible $50 million worth of transactions.*

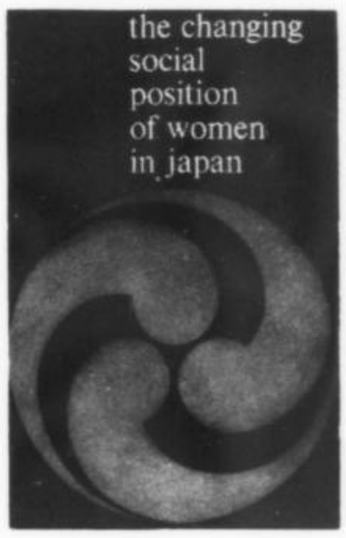
■ *The world's population increase has brought the proportion of the "under-twenties" to over 50% in some countries. The total of young people in school increased 62% from 257 million to 417 million between 1950 and 1960.*

■ *Meteorological information from around the world is now supplied by 8,000 fixed weather stations as well as by 3,000 merchant ships and 3,000 aircraft. Weather satellites now supplement this network.*

Imp. GEORGES LANG, PARIS. IMPRIMÉ EN FRANCE.

THE OTHER HALF OF THE WORLD

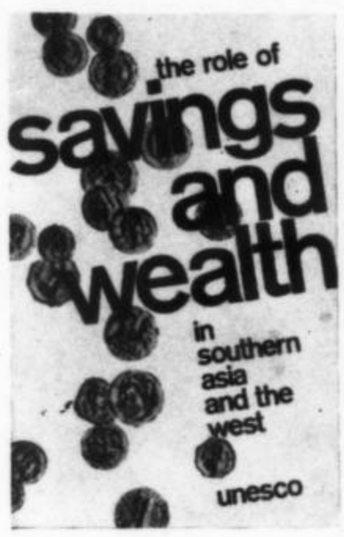
Some important Unesco publications that lift the curtain of ignorance about the EAST



THE CHANGING SOCIAL POSITION OF WOMEN IN JAPAN

A study of the major changes in the status of Japanese women during the past ten years.

$2.00



THE ROLE OF SAVINGS AND WEALTH IN SOUTHERN ASIA AND THE WEST

What makes some people become rich while others remain poor? An examination of Southern Asian characteristics and their effect on economic development.

Paper $4.50
Cloth $6.00

From the Great Translations Series sponsored by Unesco:

POEMS OF SOLITUDE

The works of six medieval Chinese poets presented in a brilliant translation.

$3.50

THE RAMAYANA

India's great national epic, translated by one of the leading writers in Tamil.

$3.25

VOICES OF DAWN

A delicate translation of some bitter-sweet and witty poetry from Korea.

$2.25

From the Art Slide Series:

CEYLON

Great periods of Ceylon's art, presented in 30 beautiful color slides, 2" × 2", packed in a plastic container with explanatory brochure.

$10.00

Order from
UNESCO PUBLICATIONS CENTER
801, Third Avenue, New York 22, N. Y.

Imp. GEORGES LANG, PARIS. IMPRIMÉ EN FRANCE.

STAINED GLASS ARTISTS OF TODAY

The makers of stained glass in Europe achieved their greatest masterpieces in the 12th, 13th and 16th centuries. In the 16th century one young French stained-glass craftsman opened a workshop in the shadow of the great Gothic cathedral at Reims. Since then the family tradition has been handed down uninterruptedly from father to son. Now, for the first time, it has passed to a daughter (shown here working on a window) who is adding new lustre to the renown won by her ancestors. (Story page 17)

© Almasy